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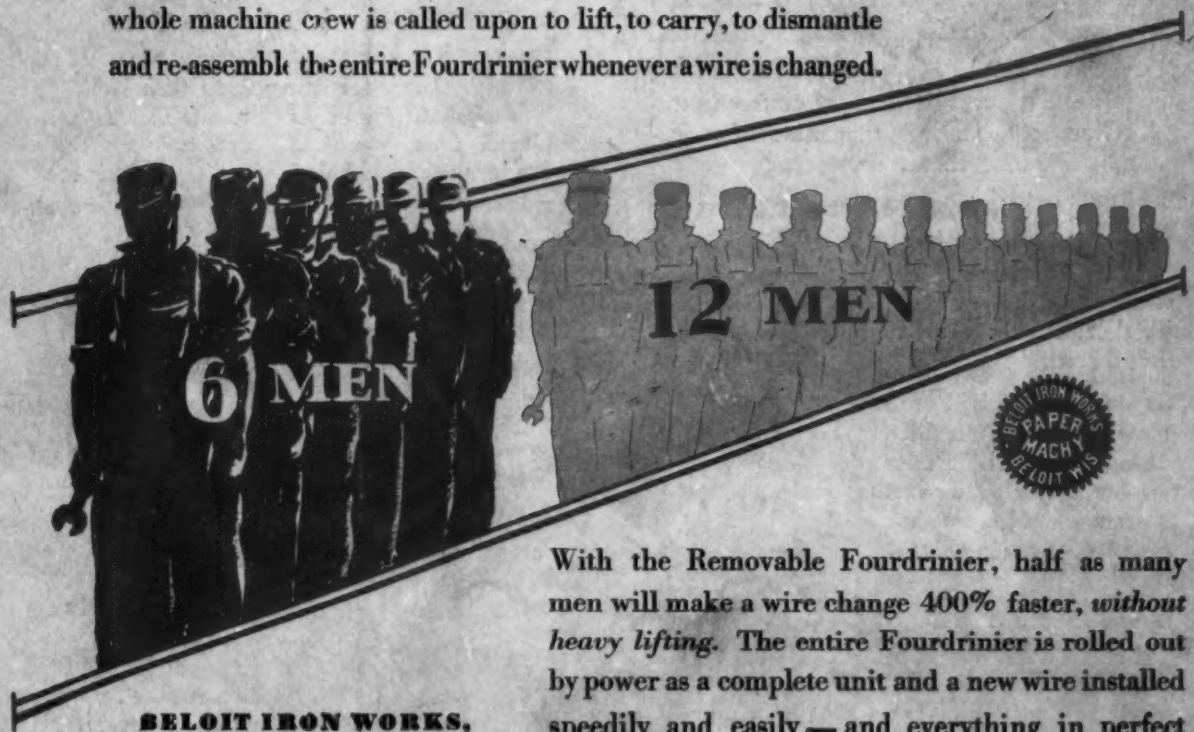
Vol. LXXXVIII, No. 16 APRIL 18, 1929 United States, Per Annum, $4.00 Canada and Foreign Countries in Postal Union, $6.50

—*and* DON'T FORGET *the Workers*

In this age of high-speed production the use of manual labor is fast disappearing in the paper industry. Various automatic devices do the lifting and carrying. And properly so, because it has been found cheaper. Yet, we find mills where wire changing methods are as primitive as a century ago, where the whole machine crew is called upon to lift, to carry, to dismantle and re-assemble the entire Fourdrinier whenever a wire is changed.

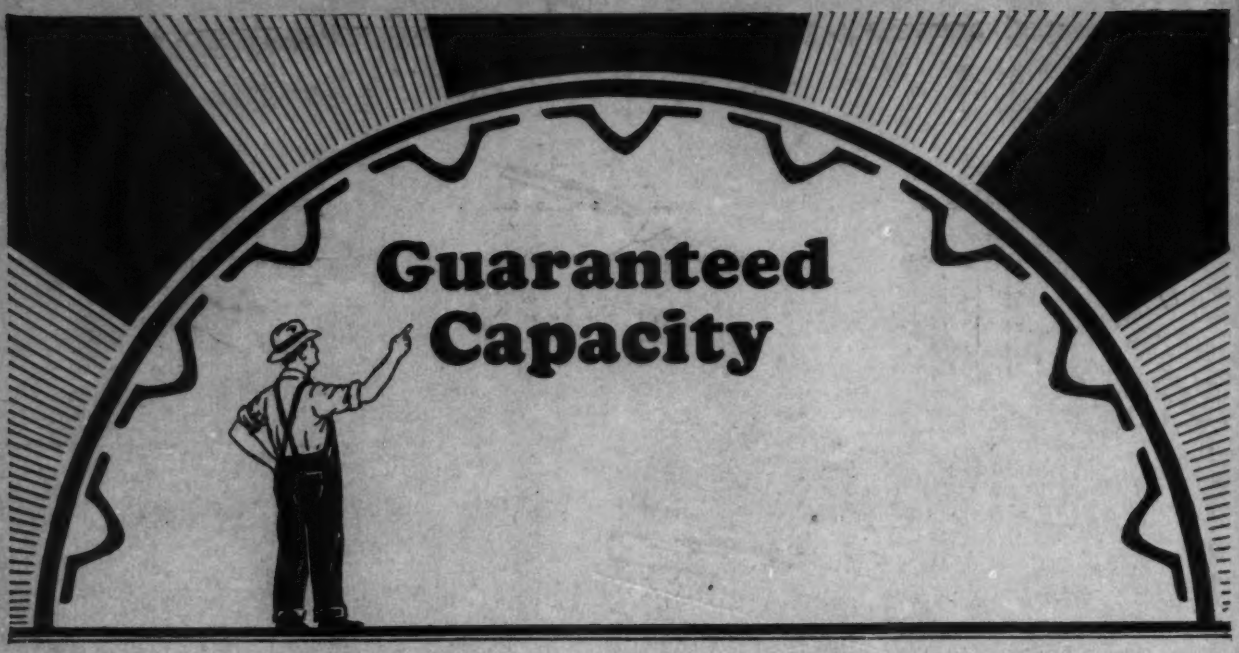
BELOIT IRON WORKS PAPER MACH'Y BELOIT WIS



BELOIT IRON WORKS PAPER MACH'Y BELOIT WIS

With the Removable Fourdrinier, half as many men will make a wire change 400% faster, *without heavy lifting.* The entire Fourdrinier is rolled out by power as a complete unit and a new wire installed speedily and easily — and everything in perfect alignment.

BELOIT IRON WORKS,
BELOIT WIS , U. S. A.



Is Your Barking Drum Capacity Guaranteed?

The U-BAR Barking Drum GUARANTEE

Every U-BAR Drum carries a guarantee for two years at a minimum speed of 7½ r.p.m. (10 ft. diam.) running half full of wood at an average of 3,000 working hours per year. This is of course in addition to the usual guarantee of workmanship and materials.

The Way to Big Production

BIG PRODUCTION of good wood is the most *economical* production when the drum can stand the gaff. And hundreds of U-BAR Drums are doing it every day, year after year, in mills all over the world.

Capacity is the thing! And it is the result of these three important factors: Interior Surface, Volume and Speed. Here is how they are provided for in U-BAR Drums:

1. INTERIOR SURFACE: That U-BARS bark more quickly and thoroughly than smooth interiors no one questions. Look at this—A European drum manufacturer recently ordered *Seventy Tons* of U-BARS for nine new drums. That's what they think of U-BARS over there!
2. VOLUME: You can load up the U-Bar Drum and keep it HALF FULL all the time. The 10 ft. x 30 ft. Drum, for instance, holds a tumbling load of about *five cords* of wood. That's VOLUME! Some open-end drums may tumble a few logs and thus hold down their maintenance—but that doesn't produce good wood, nor does it result in real capacity.
3. SPEED: U-BAR Drums meet this vitally important factor with a minimum speed of 7½ r.p.m. (10 ft. diam.). And many mills step up their capacity by running U-BARS at 10 r.p.m.

That's SPEED!

So when you buy barking drums ask, "What about the capacity and guarantee?"

Ask the Mills That Use Them

Fibre Making Processes, Inc.
CHICAGO, U. S. A.

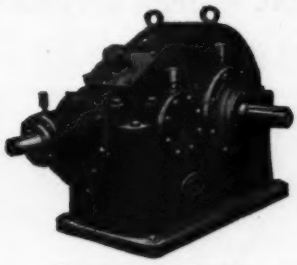
Canadian Barking Drum Co., Ltd., Toronto

Entered as second class matter August 12, 1925, at the Post Office at East Stroudsburg, Pa., under Act of Congress of March 3, 1879. ESTABLISHED 1872 FIFTY-SEVENTH YEAR Published every Thursday by the Lockwood Trade Journal Co., at 34 N. Crystal St., E. Stroudsburg, Pa. EXECUTIVE AND EDITORIAL OFFICES: 10 East 39th Street, NEW YORK CITY. CHICAGO, 123 West Madison Street, Chicago, Ill.

VERTICAL

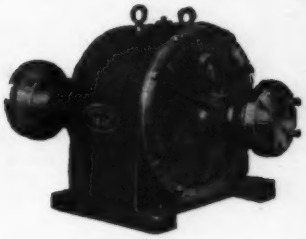
Worm Gear Type

RIGHT ANGLE



Spiral Bevel Herring-bone Type

HORIZONTAL



Spur Gear Type

All Paper Mill drive conditions can be met with Philadelphia SPEED REDUCING UNITS

ONE NAME—ALL TYPES

PHILLIE GEAR

Speed Reducers
are the ideal drive for:

Agitators	Pumps
Filters	Rolls
Pulp Screens	Save-alls
Cutters	Beaters
Winders	Stokers
Slitters	Rotary Driers
Calenders	Conveyors

AGMA

When you want a Spur Gear Unit at Point A—and a Worm Gear at point B—and a Herringbone at C and a Spiral Bevel at D—remember you can get all types from one maker — namely — "Phillie Gear." Think what this means in simplifying your problems, in saving time and money, in centralizing responsibility. Standardize on Philadelphia Units and you insure the same high standard of design and manufacture throughout all your Units in the mill.

—plus the advantage of dealing with a manufacturer who can give you unbiased advice as to which type is best for certain particular requirements.

—plus the knowledge that in every detail these units are made to give the best SERVICE.

Main Office and Plant Erie Ave. and G St. Phila., Pa.

PHILADELPHIA GEAR WORKS

Manufacturers of Industrial Gears and Speed Reducing Units

PHILADELPHIA, PENNA.

Branch Sales and Engineering Office: 12 E. 41st St., New York

FIDALGO DRYING SYSTEMS

Experience in complete installations make Satisfied Customers

SPECIAL PROVEN APPARATUS

FOR

BLEACHED PULP

Many years experience in connection with Bleached Textiles.

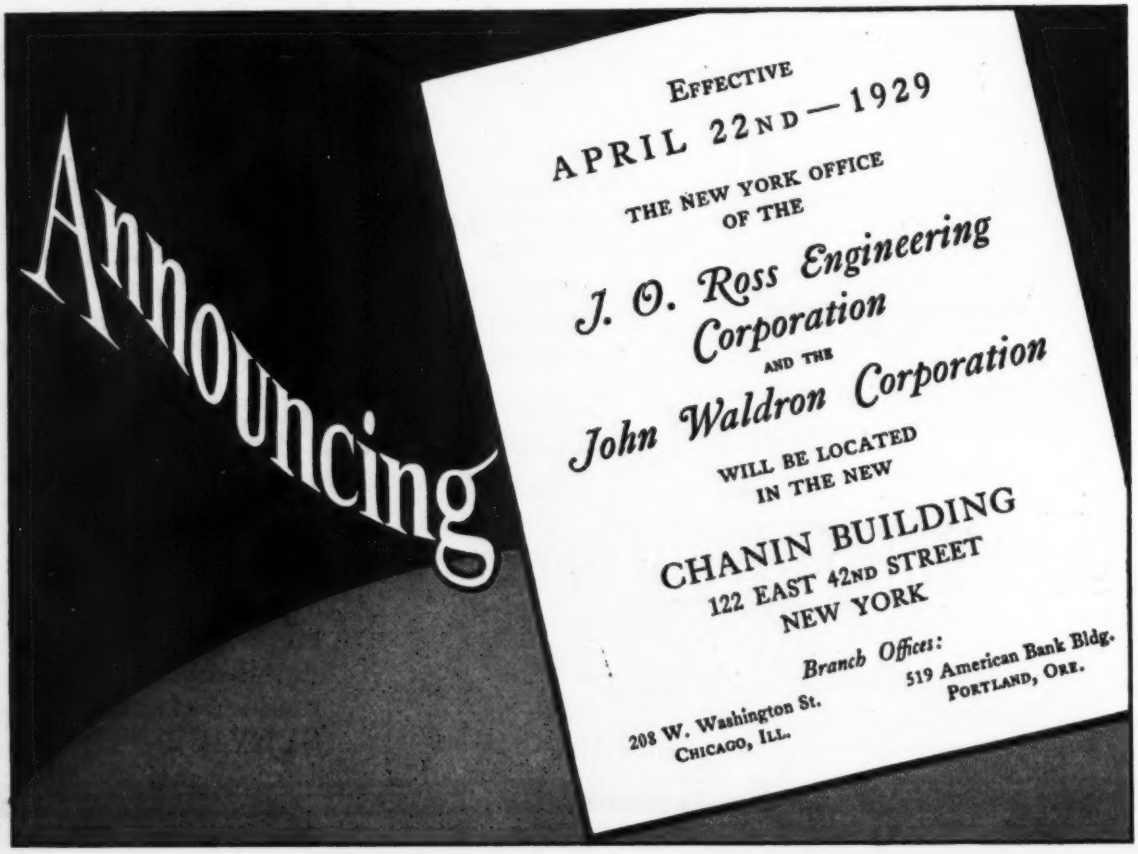
NEW TYPE PULP SHREDS COMING OFF DRYERS. UNION BAG PULP MILL, TACOMA, WASH.

Users prefer pulp dried by this system. ***Complete patent protection guaranteed.***

Same strength in beater with new shred as wet pulp.

TECHNICAL ECONOMIST CORPORATION

TELEPHONE WHITEHALL 5243 — 40 RECTOR ST., N. Y. CITY — CABLE—HERENCO



Are You Up-to-Date on WOOD ROSIN?

If your experience with wood rosin is limited to trials made a few years ago, it is no longer conclusive. At that time there was only one grade of Hercules Wood Rosin, known as "F".

As a result of constant research and development, Hercules Wood Rosins are now produced in the following grades:

Hercules FF Wood Rosin—for use where dark color is not a bar.

Hercules FF Wood Rosin No. 11—with reduced tendency to crystallize.

Hercules FF Wood Rosin No. 20—good solubility—greatly reduced tendency to crystallize.

Hercules Limed Wood Rosin—for use where high melting point is essential.

Hercules B Wood Rosin—for toughness and strength.

Hercules Treated B Wood Rosin—for high melting point, toughness and strength.

Hercules I Wood Rosin—brilliantly clean and successfully replacing N, WG and WW grades for many uses.

Today this product is successfully entering many markets that were formerly closed to wood rosin. Where it is suitable, Hercules Wood Rosin possesses distinct advantages. To those who would like to bring their knowledge of wood rosin up to date, we shall gladly furnish detailed information and technical assistance.

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(INCORPORATED)

943 Market Street, Wilmington, Delaware

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WOOD ROSIN
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Soda Ash

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Contract or Spot Delivery
In tank cars and multiple unit cars.

Write for Prices

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Alkalies and Chemical Products Manufactured by The Solvay Process Company
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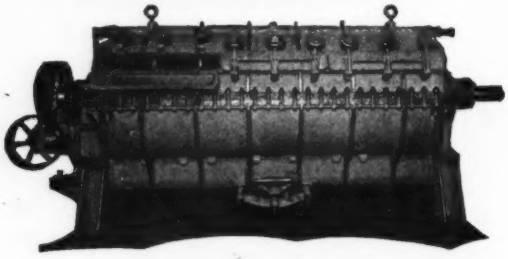
Internal Spraying

of the rotating filter leaves eliminates need of removing them for washing.

VALLEZ

ROTATING LEAF FILLERS

form an even cake over entire filtering surface, giving maximum filtration efficiency, prolonging the cycle and reducing labor costs.
Save a pulp loss of at least 3½ pounds per thousand gallons of black liquor. Clear ash and other impurities from green liquor and lime from white liquor. Waste waters can be used over again.



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Continuous in operation and require a minimum of supervision. Self-discharging; self-cleaning; work automatically. Have high capacity on lime sludges and white waters. Also used as washers and thickeners.

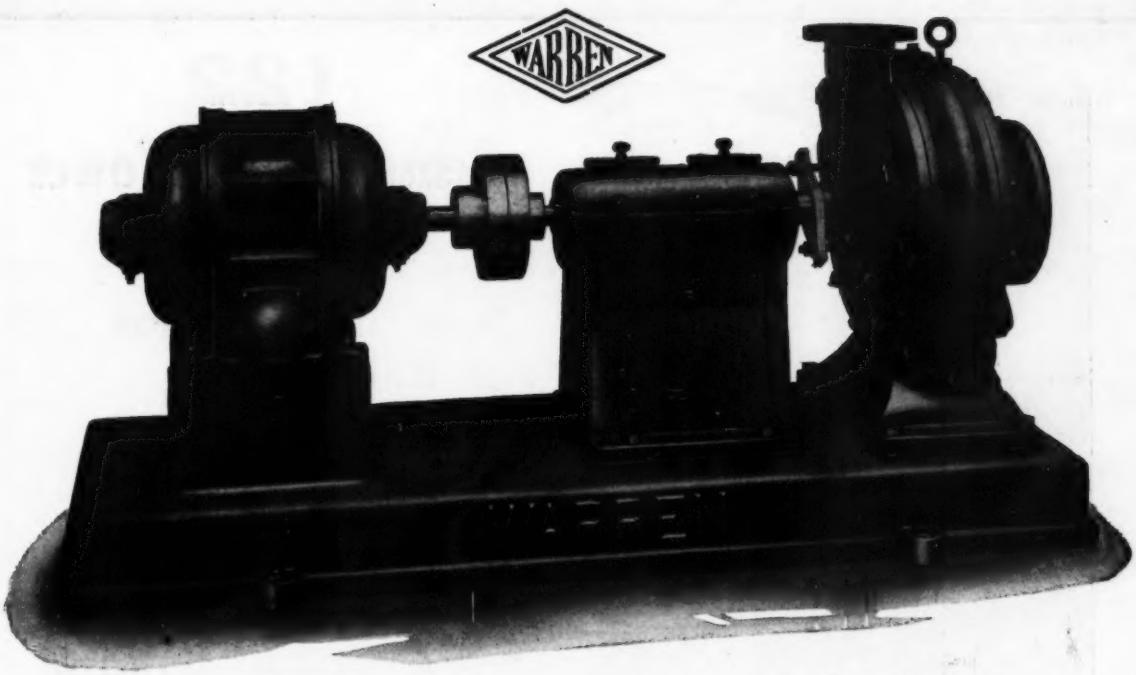
J. & G. QUADRUPLE EFFECT EVAPORATORS & CONCENTRATORS

Especially designed to give high capacity and concentration on black liquors.

We are able to take care of any filtration and evaporation problem. Let our engineering department submit recommendations, equipment and estimates. Write for catalogue.

JOUBERT & GOSLIN MACHINE & FOUNDRY CO.

Main Office and Works: Birmingham, Ala.
New York Office: 82 Beaver Street
Cable address: "JOUGOS" Western Union Code—5 letter



Warren Stuff Pumps cut cost of moving stock

COMPETITIVE performance tests on stuff pumps were conducted by a large mill prior to purchasing new equipment. Comparison of test results proved the efficient, economical operation of Warren Stuff Pumps, led to an order for 12.

Designed by engineers thoroughly familiar with the problems of handling stock, Warren Stuff Pumps move stock up to 6% consistency quickly, efficiently, without clogging and without requiring a lot of attention. It will pay you to investigate the savings that can be made in your mill. Let us send you the facts.

Warren

Steam Pump Company Inc. WARREN **Warren Massachusetts**

Agencies in all principal cities

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122
Jenssen Two Tower Acid Systems

Now in Operation or Building - -

Jenssen Spray Type Cooler
Decker Cooking Process
Kamyr Feltless Wet Machines
Kamyr Pulp Presses
Strindlund Relief Cooler
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Western Office: 1017 White Building
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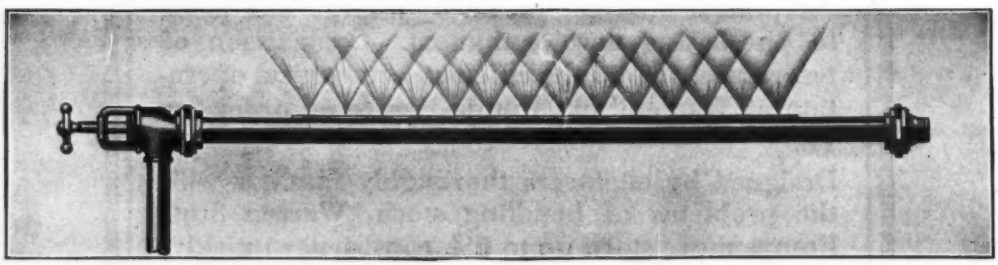
THE "RAINSTORM" SHOWER PIPE



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THE SMITH & WINCHESTER MFG. CO.

SOUTH WINDHAM, CONN.

ESTABLISHED 1828

A Complete Line of Paper Bag Making Machinery

BUILDERS OF DEPENDABLE MACHINERY FOR THE PAPER MILL

The Undercut Trimmer

Die Cutting Presses

CHEMICAL AND MECHANICAL PULP

BLEACHED SULPHITE

Kellner-Partington Paper Pulp Co. Ltd.
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UNBLEACHED SULPHITE

Cellulosefabriks A.—G., Bratislava, Cecho-Slovakei
Bergvik och Ala Nya Aktiebolag, Söderhamm, Sweden
Svanö Aktiebolag, Svanö, Sweden
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KRAFT PULP

Nensjö Cellulosa A.—B., Sprängsviken, Sweden
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WAYAGAMACK KRAFT PULP

CANADIAN KRAFT LTD.

THREE RIVERS, CANADA

Sulphite Pulp—Paper and Board
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Bleached Sulphite — Bleached Soda Pulp
Howard Smith Paper Mills, Ltd.
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Selling Agents

THE PULP & PAPER TRADING CO.

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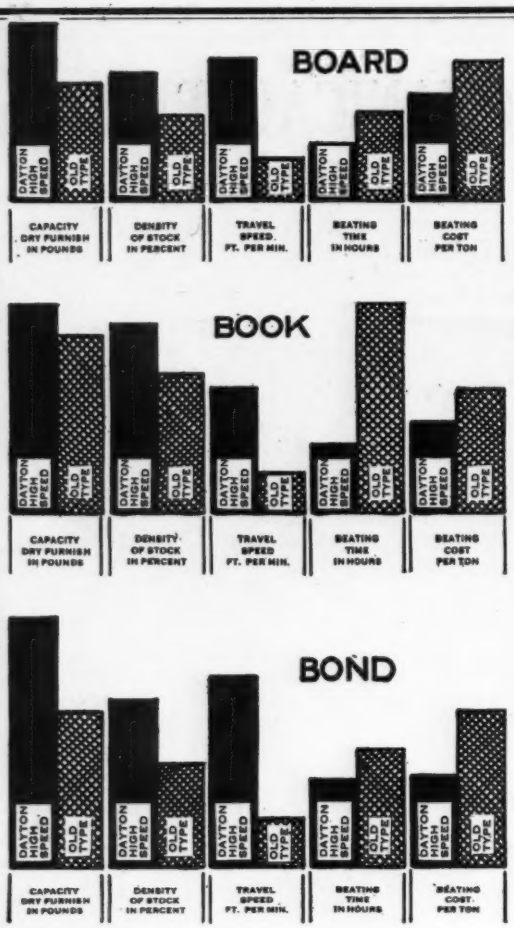

This diagram represents an average of test data obtained by actual performance on three different kinds of stock, namely Board, Book and Bond—although equally substantial savings have been secured on other stock, including Bristol, Jute, Kraft, Rag, Rope, Tissues, Roofing, Waxing, etc. It also shows the relative increase or decrease in values covering the most vital points for comparison such as CAPACITY, DENSITY, TRAVEL, SPEED, BEATING TIME, and BEATING COST.

Certainly no more conclusive evidence need be presented to justify a serious investigation of Dayton High Speed Beaters.

The Dayton Beater & Hoist Company, Dayton, Ohio
E. K. MANSFIELD, CO.,
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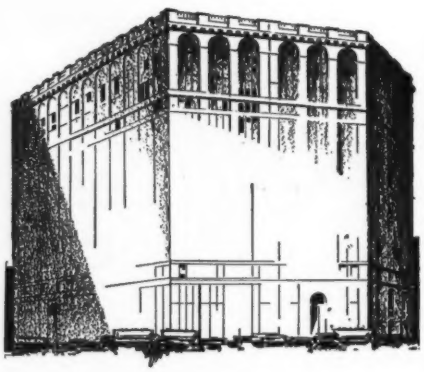
DAYTON
HIGH SPEED BEATERS

You can concentrate your buying in one New York market

The Fifth Avenue Building can be reached, easily, from any part of New York City. Buses and surface cars pass the door. An elevated line is within a block. The building is ten minutes by subway from the Pennsylvania Station, and thirteen from Grand Central. The New York shopping district is a few minutes in one direction, the financial district in another. A booth in the lobby of the building supplies full information about places of civic interest and amusement.

Situated at the intersection of Broadway and Fifth Avenue, this building has a well-known address. But, more than that, it is well-known throughout the mercantile world . . . as a buying headquarters. Here, in one building, many of the country's leading manufacturers have their office and display rooms. You can find paper, stationery, greeting cards, men's wear, women's wear, fine laces, pottery, glass, toys, novelties and kindred lines. Products so numerous and so diversified that you can complete many of your seasonal requirements on one buying trip, in the Fifth Avenue Building alone.



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Broadway and Fifth Avenue,
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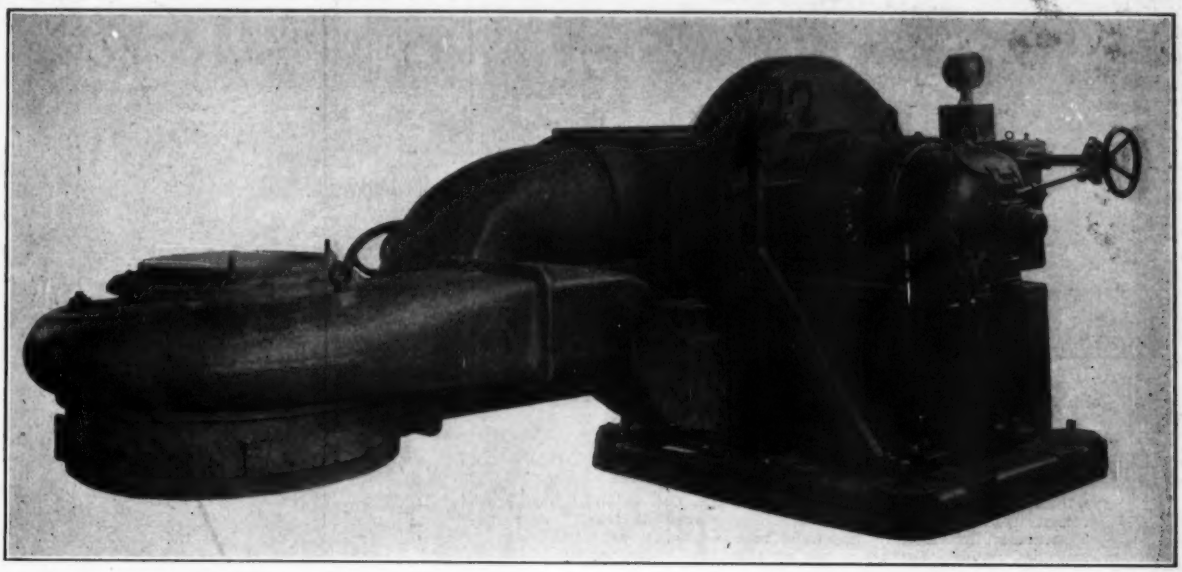
"More than an office building"



IT IS NO LONGER ECONOMICAL TO FILL DIGESTERS BY HAND

You will secure up to 40% more output by using the "FRESK" CHIP FILLING APPARATUS.
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Unequalled in results by any other patented digester filling device in *Utilization of Space—Quality of Product—Steam and Sulphur Economies.*

No difficulty in blowing off the digester.

We guarantee a higher output as compared with normal non-mechanical hand filling.

The "FRESK" CHIP FILLING APPARATUS can be easily installed on any digester.

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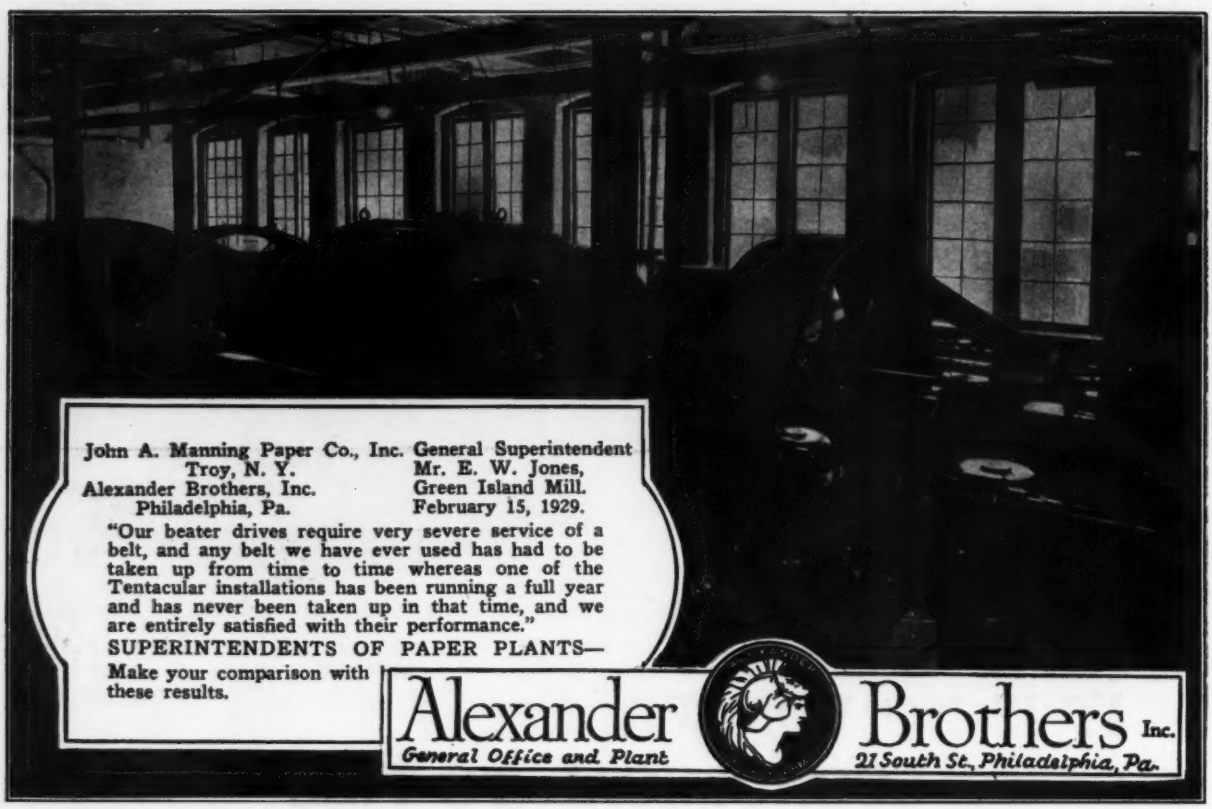
John A. Manning Paper Co., Inc.
Troy, N. Y.
General Superintendent
Mr. E. W. Jones,
Alexander Brothers, Inc.
Philadelphia, Pa.
Green Island Mill.
February 15, 1929.
"Our beater drives require very severe service of a belt, and any belt we have ever used has had to be taken up from time to time whereas one of the Tentacular installations has been running a full year and has never been taken up in that time, and we are entirely satisfied with their performance."
SUPERINTENDENTS OF PAPER PLANTS—
Make your comparison with these results.
Alexander Brothers Inc.
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Unexcelled Service *Superior Quality*

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Digester Linings 4" to 8" Thick
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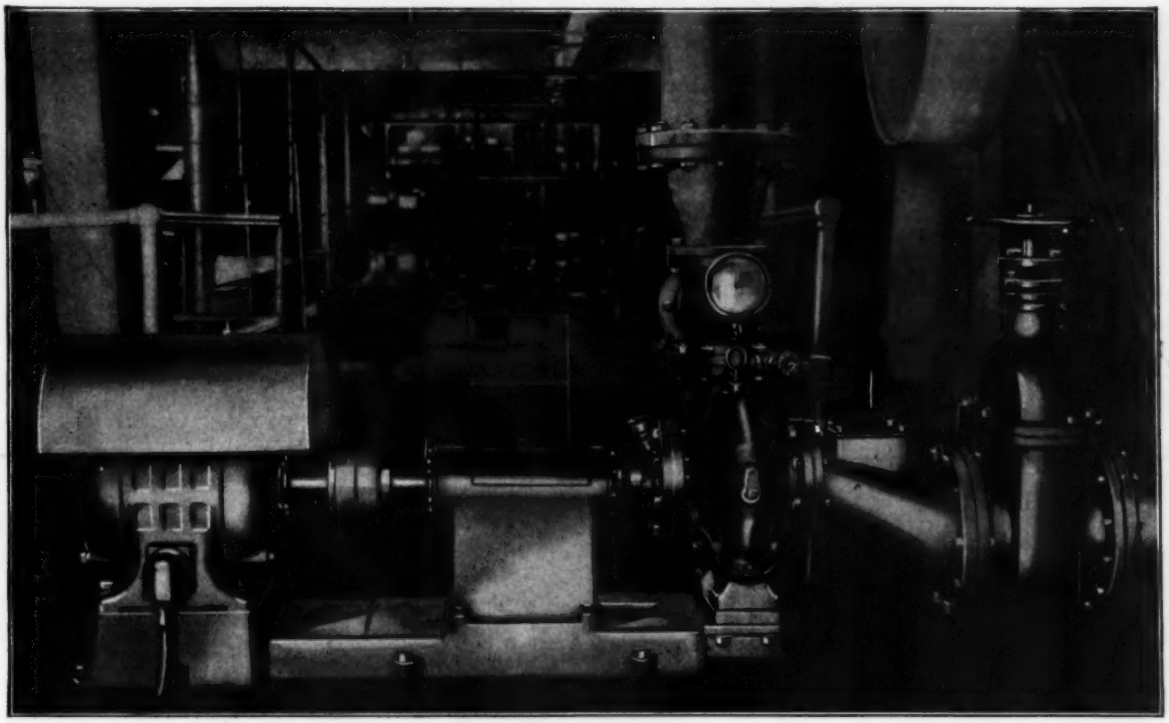
Sulphate,
Soda and
Sulphite
Pulp Mills

STEBBINS ENGINEERING & MFG. CO.

Chemical Pulp Mill Engineers

WATERTOWN, NEW YORK - - - - - - - - - - - - U. S. A.



First installation leads to *four* others . .

A 5" F-M stock pump with a 25 hp. F-M Motor was installed in the East Millinocket plant of the Great Northern Paper Company to handle 3% stock to No. 1 machine. This unit proved so efficient that to take care of an emergency caused by the failure of another make pump it was hurriedly piped to No. 2 machine and successfully handled sufficient stock for both machines.

As a result four more F-M Stock Pumps and motors were installed in this plant.

Where stock pumping is a problem, Fairbanks-Morse Engineers can quickly show you the solution with F-M stock Pumps and Motors.

FAIRBANKS, MORSE & COMPANY

900 S. Wabash Ave., Chicago

32 Branches at your service throughout the United States

FAIRBANKS-MORSE

PUMPS · DIESEL ENGINES · MOTORS · SCALES

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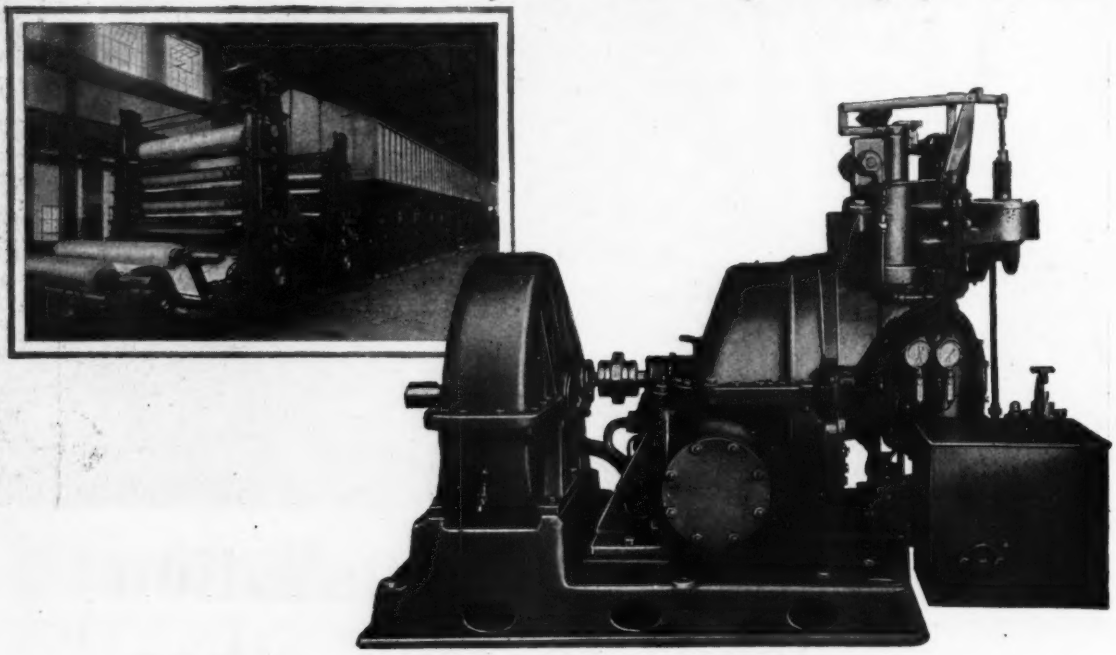
A turbine drive ~ *accurate to a fraction of one per cent*



Speed variation averaging only a fraction of one per cent at any point over a wide range—that's the service available in the G-E mechanical drive turbine with its ingenious governor mechanism.

Almost constant speed over a wide range means efficient operation, no underweight or overweight stock—and it means over-all economy.

This turbine supplies plenty of clean steam for your driers—more economy. Week-end installations have been made with no loss of production; present back lines can be used.

Your nearest G-E office can supply you with detailed information about this drive. Write or phone.

Where the back line can be discarded with no great loss, or where the installation of new paper machines is contemplated, specify G-E sectional drive. Each year, General Electric installs the largest number of new sectional drives on this continent.

175-24

GENERAL ELECTRIC

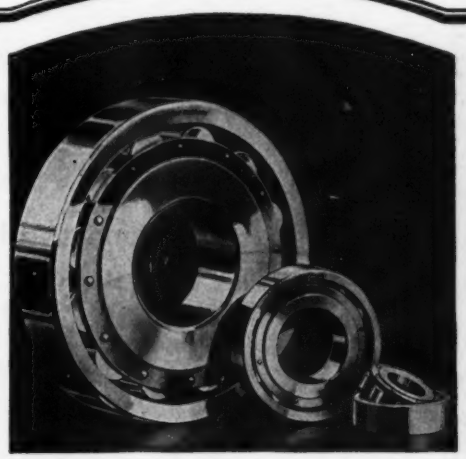
GENERAL ELECTRIC COMPANY, SCHENECTADY, N. Y., SALES OFFICES IN PRINCIPAL CITIES

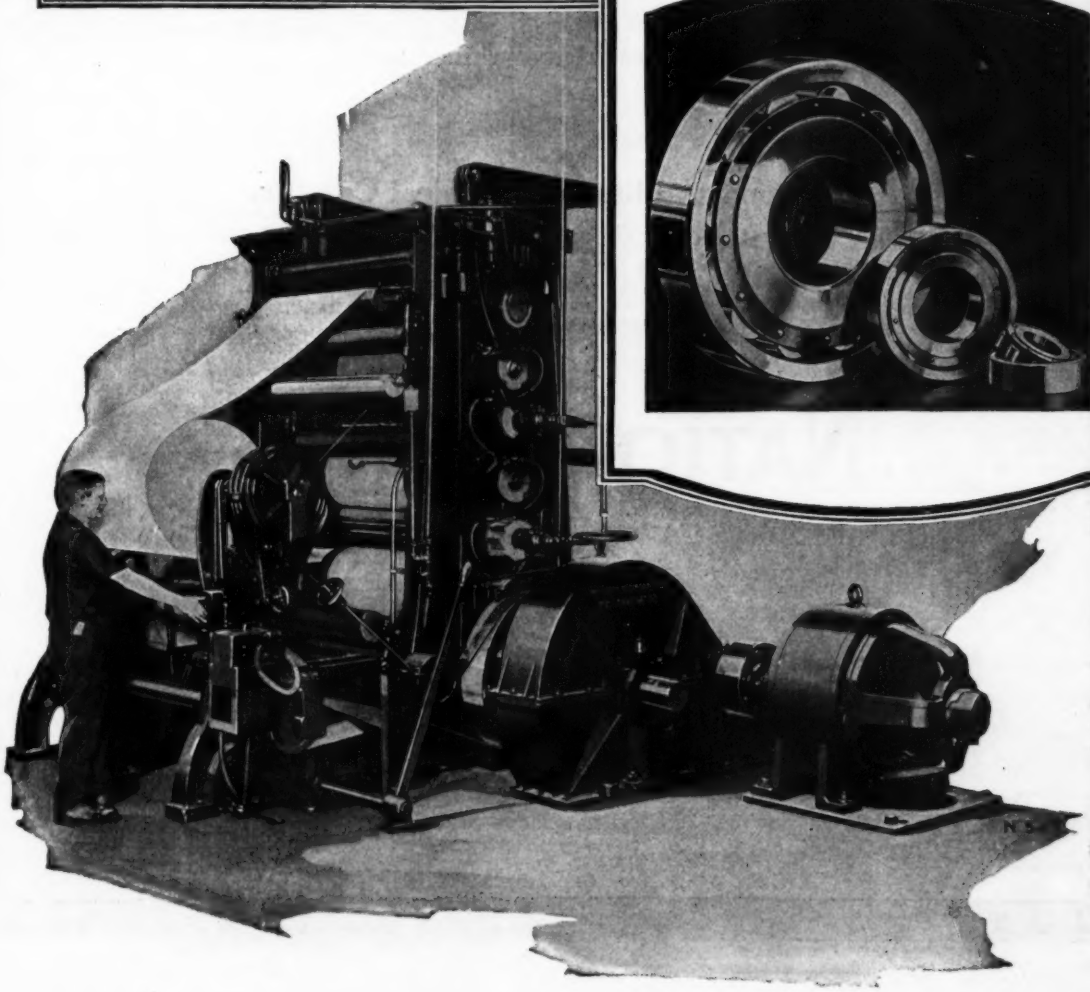
"HOFFMANN"

THIRTY-FOUR of these motorized calender stacks are in one of the plants of the Champion Coated Paper Co. The reduction gear units (Fawcus Machine Co., Pittsburg, Pa., builders) are equipped with "HOFFMANN" Precision Roller Bearings on both gear and pinion shafts. The service rendered by these bearings—in a period of over 3 years—has been eminently satisfactory—involving, as it does, both high speed and heavy load.

Write for Catalogs 904, on "HOFFMANN" Roller Bearings, and 905, on "NORMA" Ball Bearings.

NORMA-HOFFMANN BEARINGS CORPORATION
STAMFORD, CONN. • • U.S.A.





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CROCEINE SCARLET FP CONC.

ESPECIALLY recommended for dyeing chemical pulps in the beater.—Possesses excellent fastness to light.—Does not foam, and leaves a nearly colorless "whitewater".

National Aniline & Chemical Co., Inc.
40 Rector Street, New York, N. Y.

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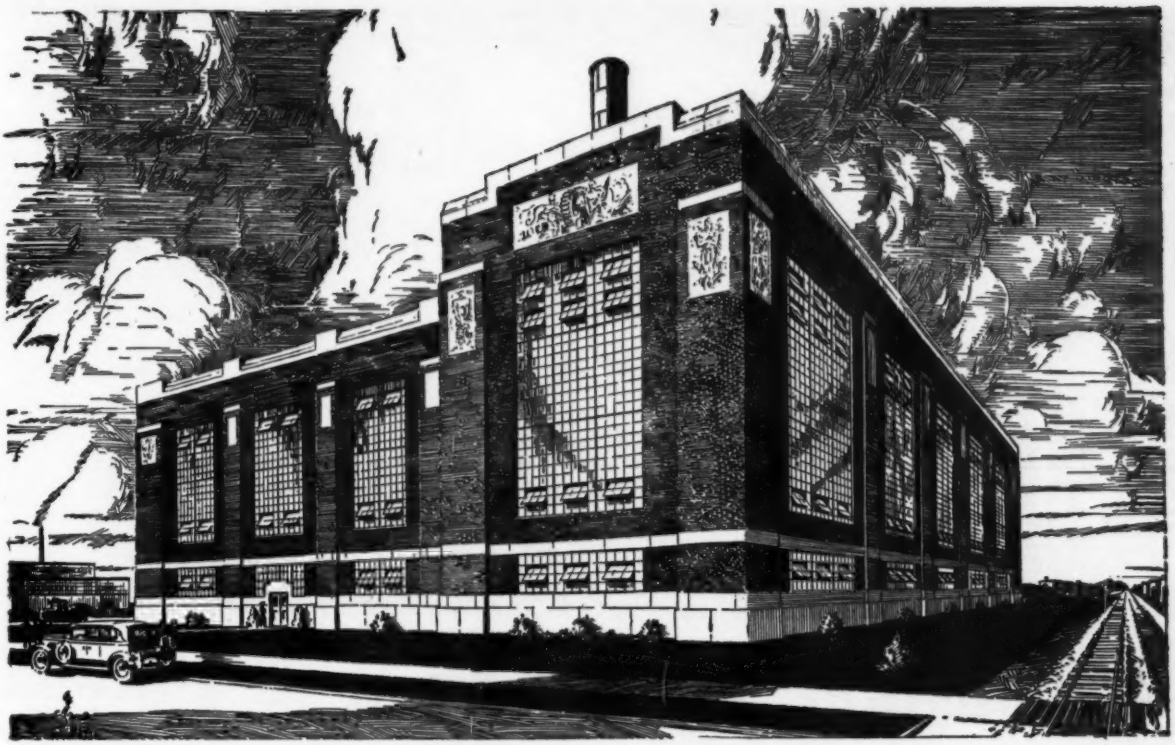

One important engineering service Austin provides consists of surveys and reports on power and boiler houses.

Building for a Billion-Dollar Industry

The manufacture of Pulp and Paper now ranks seventh in the United States, and first in Canada, with respect to cash invested in plant and equipment. Great new projects are being developed—which to fulfill their possibilities, must be designed and built with the same splendid vision that has marked their conception.

The Austin Company welcomes the opportunity of working with you from the very beginning of your plans for new plants, or additions to present facilities. Austin has had a notably successful experience in the Paper industry—having built for more than forty clients from Coast to Coast.

As the Paper Industry develops into greater and greater manufacturing units, it finds The Austin Company fully organized and ready with Plant Engineering, Layout, Design and Construction for enterprises of any size. So, as you think of plant development on a large scale, consider how greatly your Company, too, can profit by Austin's extraordinary facilities for high grade construction with speed and low cost.

Austin will work from your engineers' plans, or will design and build your plant complete, guaranteeing in the contract:

1. ***Low total cost for the complete project***
2. ***Completion date within a specified short time, with bonus and penalty clause if desired***
3. ***High quality of materials and workmanship throughout.***

Each of sixteen district offices, Coast to Coast and in Canada, furnishes a local or national service. For approximate costs and other interesting building data on paper mills of any size in any locality, phone the nearest Austin office, wire, or mail the memo below.

THE AUSTIN COMPANY-*Engineers and Builders*-CLEVELAND

New York Chicago Philadelphia Detroit Cincinnati Pittsburgh St. Louis Seattle
Portland Phoenix The Austin Company of California: Los Angeles Oakland and San Francisco
The Austin Company of Texas: Dallas The Austin Company of Canada, Limited

AUSTIN

Memo to THE AUSTIN COMPANY, *Cleveland*— We are interested in a

_____project containing_____sq. ft. Send me a personal copy of

"The Austin Book of Buildings." Individual_____

Firm_____ City_____

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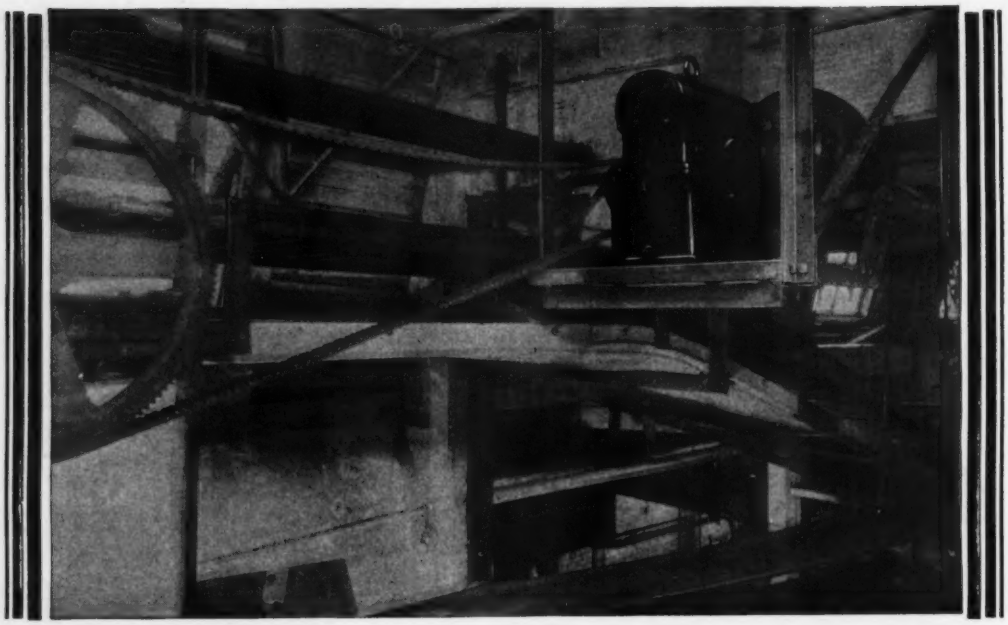

A Constant, Smooth Flow *of* Power

A COMPACT, reliable, and efficient Speed Reducer that transmits a constant vibrationless flow of power is about as near ideal as can be specified. Yet that is no exaggeration of the operation of a G & F Worm Gear Speed Reducer. Properly installed under recommended loads these speed reducers operate indefinitely without attention except for periodic lubrication.

In addition to the proper ranges of Worm Gear Speed Reducers, our line includes the proper ranges of Planetary and Herringbone Speed Reducers. This makes it possible for us to honestly study every Speed Reducer problem and recommend the proper type and size for the particular set of conditions.

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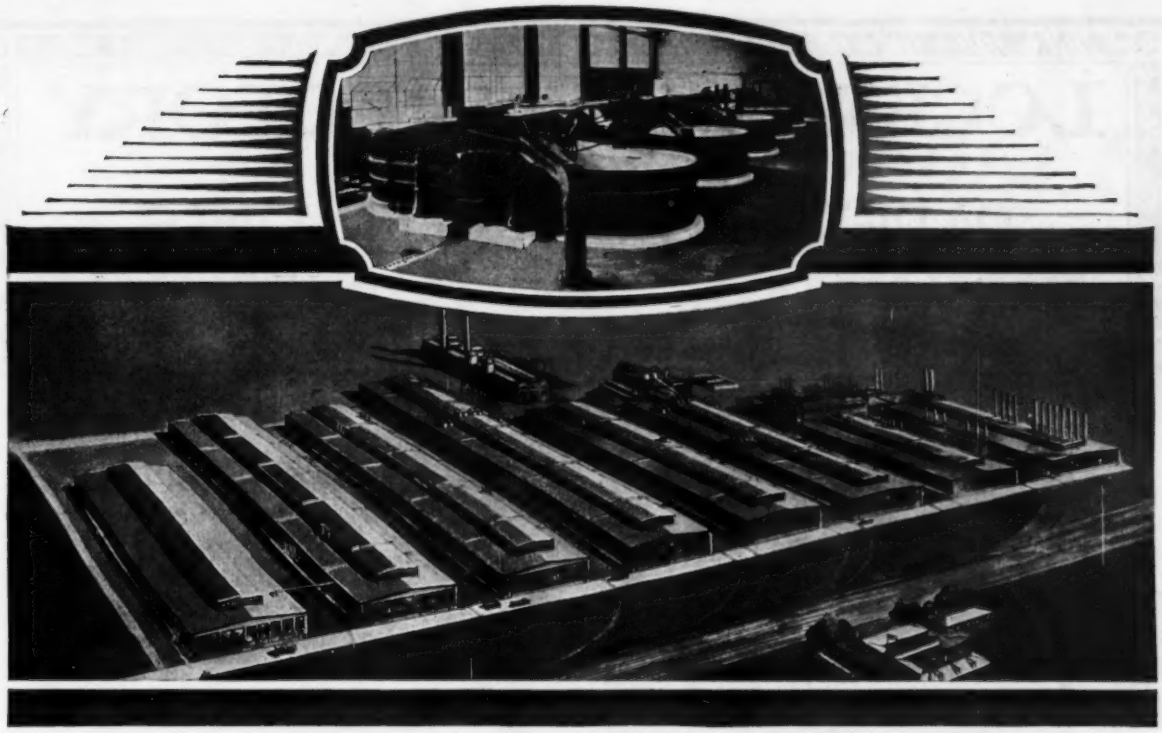

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One of the finest of their many plants is conveniently located at Manville, N. J. It serves the entire Eastern seaboard quickly and economically.

This plant, which is one of the most modern of its kind in the world, produces many of the materials for which the Johns-Manville Corporation is known. The well-known Improved Asbestocel pipe covering and other insulating materials — J-M asbestos built-up roofing felts and industrial flooring—J-M brake linings and packings, etc., are but a few of the products turned out here in large volume.

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OF THE
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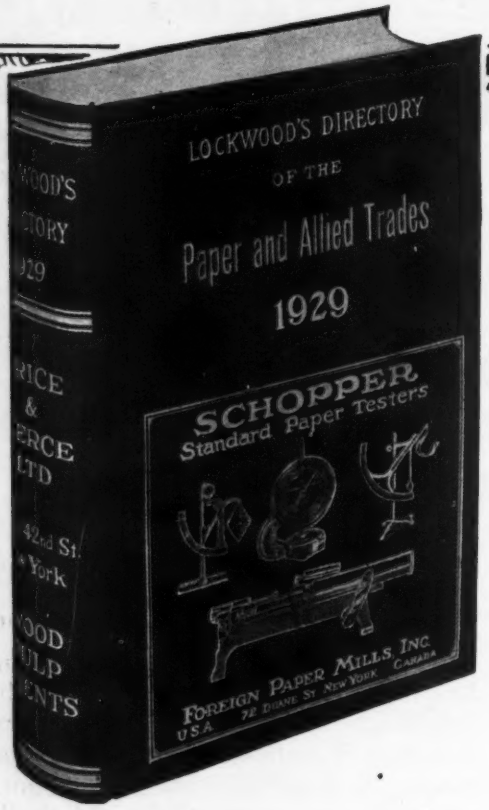

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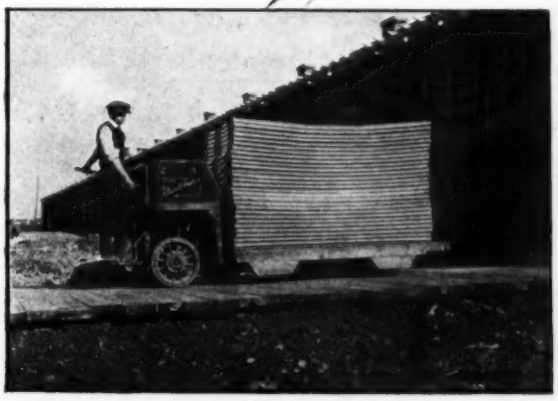

"I'm going to analyze those handling costs myself"

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A brief conference with the shipping room foreman—a careful breakdown of cost figures—a comparison of materials handling methods and equipment—within a week the General Manager of a large paper mill had collected the facts. He found that electric trucks were effecting tremendous economies in other mills on jobs similar to his own. His inquiries revealed that one electric truck manufacturer, the pioneer and leader in the field for more than 22 years, had applied his trucks to more jobs than all other makes combined. Figures were laid before him that showed how this manufacturer's trucks, practically without exception, create sufficient savings during the first year to repay their initial cost—and that 90% of these trucks sold during the past 10 years are still in every-day use.

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SALT

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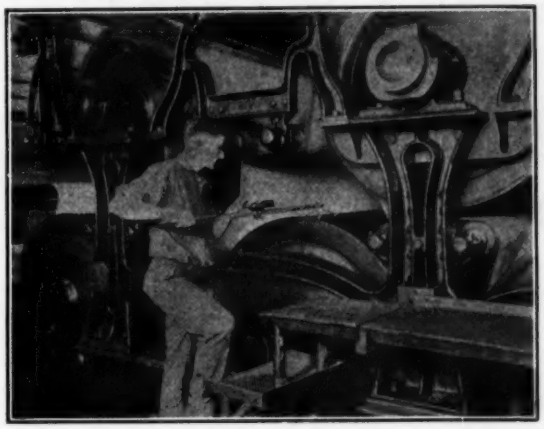

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ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SEVENTH YEAR

Published Every Thursday by the
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It is a modern, economical development an up-to-date paper mill cannot afford to overlook.
Five large paper mills now equipped with air conveyors take 45,000 per annum.

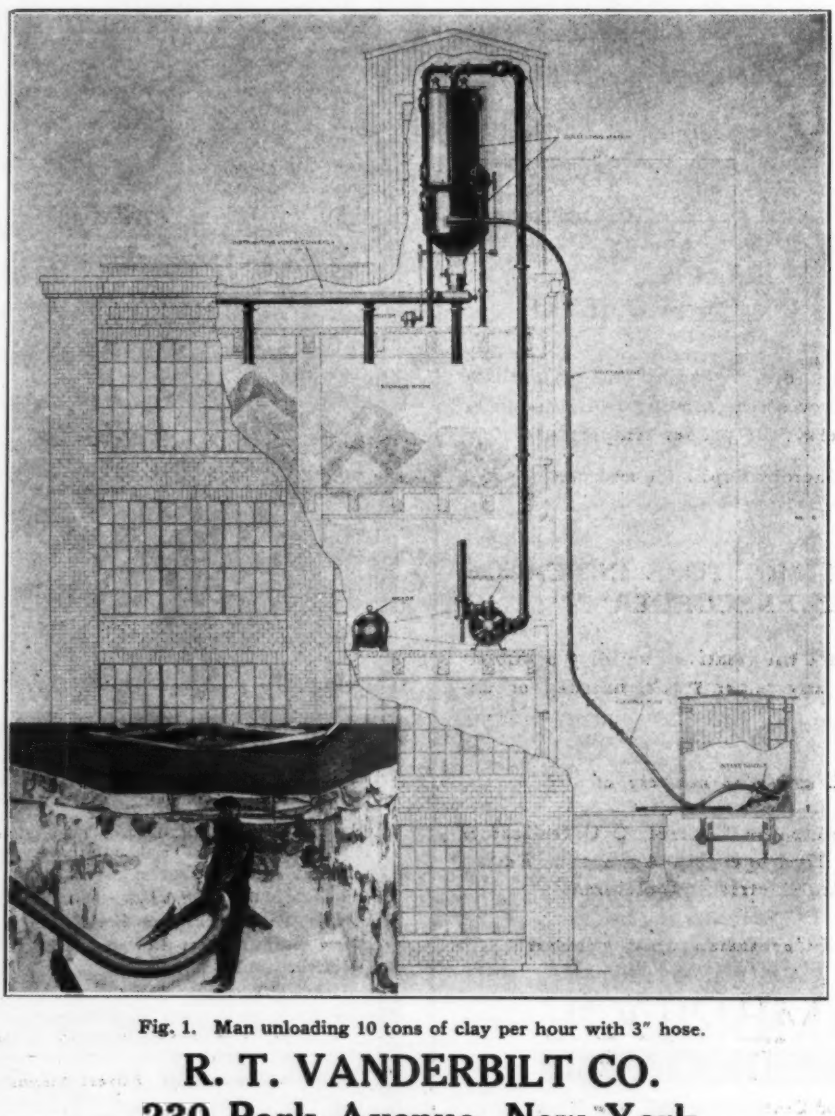

Fig. 1. Man unloading 10 tons of clay per hour with 3" hose.

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230 Park Avenue, New York

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PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. LXXXVIII, No. 16 — Thursday, April 18, 1929

World's Largest News Print Machine Starts

Mammoth 304-Inch Machine Erected In the Great Lakes Paper Co's. Plant at Fort William, Ont., by the Bagley & Sewall Co., of Watertown, N. Y., Tuned Up Ready to Begin Commercial Production Within Few Days—New Machine Is Second Unit Established Since Construction of Mill to Have Eventual Capacity of 100,000 Tons Annually

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., April 15, 1929.—Does Canada possess the biggest news print machine in the world? If so, does the Great Lakes Paper Company, of Fort William, Ont., possess that machine?

Your correspondent on more than one occasion during the past few years has had to place on record the claim that the world's biggest news print machine has just gone into operation, first in one company's plant, then in another, and he hesitates, therefore, to announce that a machine beating all the world-beaters in point of size has just been erected in Canada. Still that is the claim being made for the mammoth paper machine which has just been erected in the Great Lakes Paper Company's Plant at Fort William, and which is just now being tuned up in order to be put into regular production two weeks from now.

This machine which was built by the Bagley & Sewall Company, of Watertown, N. Y., turns out a sheet of paper 304 inches wide, and is the second unit established by the company since construction of a mill to have an eventual capacity of 100,000 tons of news print annually was put in hand a year ago. The Great Lakes Company is owned by the Backus-Brooks interests.

Rolland Paper's New Machine

The Rolland Paper Company, of Montreal, manufacturers of fine paper, practically all of which is sold in the domestic market, has just put its new 86-inch fine paper machine into operation at its plant at St. Jerome, Que. The total capacity of its plants is now over 8,200 tons a year. A new line of fine paper has recently been put on the market by the company, and is said to be meeting with success.

Pacific Mills Enlarging Plant

Pacific Mills, Limited, are enlarging their plant at Ocean Falls, B. C. The height of the storage dam is being increased so as to lessen the possibility and the recurrence of such a water shortage as that which recently compelled the company to close down its kraft and news print sections. The additions to the plant include a new speed turbine, a new grinder room, several new buildings and additional machinery.

Rapid Progress in Bathurst's Expansion

Enlargement of the production of the Bathurst Power and Paper Company's plant at Bathurst is being rapidly carried out.

The power supply from the Nepisiguit River power station owned by the Bathurst Power and Paper Company, will be increased 50 per cent by the early installation of a third generator of 5,000 hp.

The order for the generator includes transformers, switch gear, etc., which will ensure 50 per cent more power for the mills at Bathurst, power that will be delivered in time to take advantage of the fall freshets.

The Bathurst Power and Paper Company are also completing the installation of a third grinder motor of about 3,000 hp., which will increase their pulp output also by 50 per cent. Installation of this machinery is expected to be finished within the next few weeks.

The recently issued annual report of the company, covering the year 1928, showed an operating profit of $411,000, despite the fact that the news print mill only operated at 71 per cent of capacity.

Machine-Making Plant Busy

Although the news print depression is causing many companies to go slowly on the ordering of new machinery, the Dominion Engineering Company's works are keeping up a high level of operation on orders for news print machinery. Dominion Engineering acquired the Walmsley Company of Canada, and through that company has obtained orders for two news print machines for the Mersey River Pulp and Paper Company in Nova Scotia. The company is also completing machinery for the International Paper Company's new mill in New Brunswick, including two news print machines. Two other machines of a similar type are being built for the projected news print mill of the McLaren interests at Buckingham, Que.

Confer on Tariff

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 17, 1929.—Representatives of paper manufacturers and the newspaper publishers conferred last week with the subcommittees of the Ways and Means Committee of the House on the Free List and the Paper Schedule.

Great secrecy is being maintained by the Ways and Means Committee on the conferences being held in regard to various schedules but it is understood that an agreement has been reached between the paper manufacturers and the publishers whereby the latter will not take any steps in connection with the book paper tariff while the manufacturers have agreed to a news print definition. It is reported that the word "standard" news print will not appear in the new tariff law, about which there has been so much controversy for the past few years.

Paper Demand More Active In Philadelphia

Brisker Trading In Various Standard Grades Experienced During Past Week—Tariff Situation Arousing Great Interest In Local Paper Circles—Five Day Labor Week for Paper Mills May Stabilize Industry—Paper Stock Market Decidedly Quiet At Present

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, PA., April 15, 1929.—While cooler weather brought about a livelier demand for many grades of papers, there was also a growing request for summer specialties as a rsult of the mid-summer temperature which prevailed in the earlier days of the week. As the temperature changed with kaleidescopic rapidity from torrid to almost freezing weather within a period of twelve hours, the trade was called upon to make speedy shipments to consumers of those specialties needed to meet the temperature changes and brisker business prevailed throughout the remainder of the week, with the general list experiencing an upward swing.

Dealers Look Ahead To Legislative Changes

While present day paper demands are more gratifying and are likely to continue with the remaining days of spring, the paper dealers are looking forward to changes in the market as the meeting of the special Congress is called and action on important measures of tariff, foreign relations, agriculture, and other matters of commerce, is taken up by the legislature. It is believed that much conflict will result in the matter of protective tariff when it is viewed that foreign enterprises must be considered if the lands across the seas are to be placed in a position where they can make reparations to this country for the war debt. That the factor of reparations will be an important one in considering protective tariff is a foregone conclusion here. However, the paper trade is believed not to be seriously affected in this matter, as most of the countries involved in the paper industry abroad are from those territories that were not implicated in the war debt and its solution. With the exception of Germany, which before the war was an important exporter of paper to this country, the leading countries of paper and pulp manufacturing are those in the Scandinavian belt, where the inroads of warfare were not as damaging to business interests with this country and where products exported as competitors of American made paper are fairly well protected against unfair competitive prices abroad. German papers have been fairly well eliminated as competitors of the American made products. In the Philadelphia trade, where large quantities of German made papers were imported before the war, and where box makers' papers were distributed, owing to this city being an outstanding box-making center, there are now few German papers sold, home made papers having almost completely supplanted the foreign types. Local box paper distributors are now handling almost exclusively American made fancy papers, with the exception of one or two firms that within the past two years have again extended their distribution to English, German and Slovakian made papers of brilliant colorful designs that indicate the native strain of vivid fancy in mixture of hues. However they do not conflict with the native American fancy box grades owing to the protective tariff now in existence and are selling on a parity with our own papers of this character. When the question of paper tariff is discussed local dealers are prone to be conservative in estimates of what might be expected and few changes are looked for and these in such grades as compete with our own fancy wrapping or glassines and like specialties which have been imported within recent times at prices that have seriously damaged local business and have brought harsh complaints from glassine manufacturers in the Philadelphia territory. However, local glassines manufacturers believe that the National Association will give special attention to the tariff revision on such grades as have been most damaging to our own manufacturers rather than to a general revision.

As competition among glassine paper manufacturers retards stabilization of this class of product, a new competitor looms. This newer product, which has all the characteristics of glassine, is called glassite, and has been in the local market for the past sixty days. It is a cheaper product that meets the needs of common usage but could not be substituted where a high grade and attractive glassine is needed. The demand for glassine is fair, but prices are not as steady as desired by manufacturers who are producing under handicap and at low margins of profit.

Effect Of Five Day Week on Paper Makers

With the prospect of a five day labor week in the offing, paper manufacturers and dealers look upon this measure as a possible stabilizer of the paper industry. It is believed that curtailed production that will result from a five day week will mean higher prices for paper generally and so distributors will be looking ahead for steadier markets if the system should become a universal practice in industry.

Paper Stocks Duller

While mills hold off their needs in paper stock and are reported to be almost entirely out of the market at the present time without inquiries to indicate any future preparedness the wholesalers are lingering in duller days. There are no accumulations, however, as the open winter has kept warehouses cleaned out and collectors have been able to move all their supplies as needed by the mills or the wholesale merchants. There was heavy traffic in the better grades of book papers and ledgers and the higher priced writing stocks throughout the winter months. Now that the mills are well supplied there has been slowing down in demand for these grades. Though the paper stock market drags along there has been no softening of prices owing to the scarcity of supplies on hand.

Retail Waste Dealers Take Up Charter

A special meeting of retail waste dealers was held last Thursday at 916 North Franklin street, for the purpose of going over the charter that has been formed for the incorporation of the organization under the laws of Pennsylvania. The meeting was called by the newly elected president, William A. Coll, head of the William A. Coll Company, 879 North 9th street, for the purpose of having counsel for the new body read the charter as it will be presented to the Governor of Pennsylvania for application of incorporation during the coming week. After discussion and a few minor changes the members agreed upon its adoption. There now are fifty firms enrolled in the newly formed Philadelphia Retail Waste Dealers Association and the full quota was present at the gathering. The members are garnered from all branches of the waste industry, just as is the older Wholesale Waste Merchants Association which sprang from the old Philadelphia Paper Stock Dealers Association. The organization had its inception under the sponsorship of the Philadelphia Civic Club, working in co-operation with the City of Philadelphia for the purpose of obtaining co-operation in keeping the city streets clean and to obtain from the waste dealers their help in eliminating the scattering of refuse in their collections. Out of this co-operative movement the permanent organization of the trade body was formed and one of the measures adopted is the systematizing of collections so that the members will not be subject to the ordinance of the municipality which requires arrest and fine for the scattering of waste over the streets and walks. The associa-

tion has already aided in securing immunity for first offenders under the recent measure adopted by the Council, which imposes a heavy fine and imprisonment for the infringement of the new law.

There also will be adopted certain trade regulations and rules with the granting of the charter. These will apply solely to trade practices that heretofore have been neglected and will provide for the improvement of packing, grading and shipping of paper stock and rags. This is the first time that a retailers waste association has been formed in this city and it is planned to extend the organization of the waste collectors in this branch of the industry to other larger centers. Other officers of the association elected at the last meeting are: Vice-president, Samuel Halpern; Treasurer, L. Bornstein, L. Bornstein and Son; and secretary, Henry Rosenbaum, of the H. P., H. F. Wilson Company.

Samuel Jaspan & Sons Sold By Receivers

With the closing out under sale of the auctioneer's hammer, the wholesale paper and stationery house of Samuel Jaspan & Sons, 2036 South street, winds up its affairs through the bankruptcy courts. The firm was involved in financial difficulties two months ago and with the sale here last week of its assets on the premises of the store property in South street the business under the old regime terminates with the winding of the receivership appointed by the Courts through Norman Klauder, receivership for the creditors.

Major Collins Shows African Exploration Films

Major Alfred M. Collins, big game hunter, and head of the A. M. Collins Manufacturing Company, who returned last month from a prolonged sojourn in the African jungles in pursuit of rare specimens of big game and in camera hunting in the interior of the Dark Continent, is now showing between 8,000 and 10,000 feet of motion pictures of his explorations to scientific and geographical organizations. These pictures and collection of rare fauna, as well as trophies of big game, were secured on his fourth expedition into the interior of the African jungles on behalf of scientific investigation which began last September and terminated last January. They show 93 lions which he saw or captured and other interesting views of the almost impenetrable interior jungles. Mr. and Mrs. Collins are now at their home in Ardmore. Mr. Collin's wedding to Mrs. Helen Wilson of Ardmore was announced on September 7, last just before he set sail for Southampton, England, on his fourth expedition.

Blabon-Sandura Co., Inc. Formed

For the purpose of consolidating the sales agency of the George W. Blabon Company, manufacturers of linoleum with plant in this city, and that of the Sandura Company, manufacturers of rugs and felt base products, a subsidiary organization has been formed to be known as the Blabon-Sandura Company, Inc., with headquarters in the Finance Building, this city. Both these concerns are large manufacturers and consumers of paper products in paper and felts.

Pollution Measure Killed

The water-pollution bill which has been introduced into the Pennsylvania Legislature by Senator McCrossin of Philadelphia under the direction of the Anti-Stream Pollution Association, backed by the Isaac Walton League, was killed last week by the action of the Senate Committee on Light, Heat and Power. Under motion the bill to indefinitely defer action on the measure, was adopted 9 to 1, Senator McCrossin casting the one vote in favor of the bill. There has been aggressive campaigning in the bill this winter among business, fraternal and civic organizations by the Anti-Stream Pollution Association. Its defeat is welcome to the paper industry, as it affected the manufacture of its products where stream pollution in the past has been hard to combat but which in recent times has been kept fairly well under control by the co-operation of the paper mill owners in installing every known device to stem the flowing of chemicals and refuse into the state streams. The bill carried drastic penalties in fines and an imprisonment clause.

Wilmington Rag Plant To Be Rebuilt

Following the fire which destroyed the Peerless Rag Company plant at 109 Maryland Avenue., Wilmington, Del., rebuilding of the warehouses will shortly be undertaken. The plant was destroyed last February when fire gutted the entire structure and destroyed more than $30,000 worth of stock and equipment in the wholesale rag plant. The plant is owned by John J. Chaulk, 508 South Delaware Avenue.

Dreka Co. In Receivership

Charles L. Taylor has been appointed receiver in equity for the Dreka Company, manufacturing stationers and importers of exclusive paper goods and social stationery, 12th and Chestnut streets, which has been involved in a protective court action to reserve stationery in the nation and long has been a leader in excusiveness, catering to the consumers and engravers and dealers of the best class of imported stationery. It has been established for more than sixty years and is owned by Charles R. Hamilton. The business is solvent, the receivership being a friendly action to protect the interests of the concern.

Sayford Paper Co.'s New Lines

Specially designed doilies and favors with corresponding paper wares adapted for banquets, private parties, social events, and special occasions, as well as national holidays, have been perfected by the Sayford Paper Company. These special doilies and favors, and other paper recepticals and decorative products, are being featured on such holidays as Easter, St. Patrick's Day, Valentine Day, and like occasions, as well as for clubs, hotels and other private and public celebrations. They are decorated with designs appropriate for the occasion. Complete sets of the doilies, paper holders, favors and other decorative products are now stocked for trade consumption and the Sayford Corner, as the local office is known, is displaying samples.

Ad-Tissue Co. Buys Plant at Kiamensi

WILMINGTON, DEL., April 11, 1929.—A new industry has recently come to Wilmington in the Ad-Tissue Corporation which will manufacture and print advertising matter on toilet tissues. It is a Delaware corporation. At a meeting of the board of directors in the duPont Biltmore last week, it was decided to purchase immediately a plant suitable to the business of the company.

The president, William H. Appleby, went to New York last Friday and closed with Simon Blum negotiations for the purchase of the Kiamensi Woolen Mill property, at Stanton.

The property contains 15 acres, a large mill, six dwelling houses, water power rights and 570 feet adjoining the main line of the Pennsylvania Railroad.

The Ad-Tissue Corporation will take possession May 1, and will begin production at once. Ad-Tissue Corporations owns the patent rights of this product and it is the only company of its kind in the world.

The officers of the Ad-Tissue Corporation are as follows: William H. Appleby, President; Joseph S. Weaver, Vice-president; James T. Tong, 2nd Vice-President; Robert S. Baird, Secretary & Treasurer.

Longview Paper Men on Convention Committee

PORTLAND, ORE., April 15, 1929.—Charles F. Schaub, president of the Pacific Straw Paper and Board company, Longview, Wash., is acting as chairman of a local committee which is arranging to entertain the twenty-ninth annual convention of the Washington Manufacturers Association which is to meet in Longview May 10 and 11. R. S. Wertheimer local manager of the Longview Fibre Company, is also an active member of this committee which is planning to put Longview factories in a distinctive place in state industries.

Specialty Manufacturing Expands in Wisconsin

Menasha Wooden Ware Co. Adds Night Shift to Keep Up With Orders For Corrugated Paper Cartons—Milwaukee Printing Co. to Double Facilities For Printing of Wrappers and May Add Branch Plants—Bates Valve Bag Corp. to Start Erection of New Unit At Once

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., April 15, 1929.—Indications of the increasing extent of specialty manufacture in the paper industry of Wisconsin are shown by several announcements of the last week providing for expanded production. It has been necessary for the Menasha Wooden Ware Company, Menasha, Wis., to add a night shift in order to keep up with orders. This company went into the corrugated paper carton field about a year ago, building a new plant for the purpose, and its sales are expanding rapidly.

Facilities will be doubled by the Milwaukee Printing Company, of Milwaukee, Wis., and it is possible that branch plants will be established also, for the printing of wrappers. This comes about because of a decision rendered by the United States District Court of Illinois. The order of the court restrains the Shellmar Products Company, of Chicago, from manufacturing or selling a type of wrapper which is a combination of the opaque and transparent, or known also as the window type. Inventors of this wrapper are the Allen Quality Company, of St. Paul, Minn., who brought suit charging infringement of the patent rights.

Exclusive rights for the manufacture of this wrapper have been given the Milwaukee Printing Company by the Allen Qualley Company, and the arrangement involves sales from $1,000,000 to $3,000,000 a year. With the Shellmar competition eliminated, the Milwaukee company will arrange for branch factories in the east, in the extreme west and in Canada. It is expected that the facilities of the Milwaukee plant will be doubled. About 375 persons are employed there at present.

A newcomer in the carton field will be the Paper Package Corporation, incorporated last week at Appleton, Wis., with a capitalization of $25,000. The incorporators are E. J. McMurchie, proprietor of a printing plant at Neenah, Wis., and Harry J. and Carl J. Kahler, business men of Appleton. They plan to deal in paper, paper boards, paper boxes, labels, specialties and novelties. No plans for the operation of the business have been announced. The corporation is to have 250 shares of common stock of $100 each.

Erection will be started at once of the new building which the Hoskin-Moarinville Paper Company, of Menominee, Mich., announced recently it would build. The contract has been awarded to John Salen & Son, of Menominee. This addition is to the Bates Valve Bag Corporation unit and will be used exclusively by them for the manufacture of the Multiwall cement bag as well as to provide space for the development of bags for packing sugar and flour. A complete new unit of bag machinery is to be installed so the production can be doubled.

Mill Operations Handicapped by Floods

River levels in all of the paper manufacturing sections of Wisconsin have been higher during the last two weeks than at almost any time in their history, and operation of mills continues to be hampered. The Wausau Paper Mills Company, Brokaw, Wis., and the Marathon Paper Mills Company, Rotschild, Wis., found it necessary to suspend operations for several days until the water receded sufficiently so they could obtain enough power to operate the paper machines. Back water also stopped other mills for short periods and caused other damage.

There has been no letup in spring storms which are responsible for the extremely high condition. At no time has the water been at high levels for such a continuous period. Indications are that conditions will not grow worse, since the spring thaws are largely over, and with all gates wide open everywhere, the levels are bound to recede. Steam plants have been put to use by a number of mills.

Freight rates on news print and other paper products from Green Bay, Wis., to points along the lower Mississippi River are unduly prejudicial but not unreasonable, the Interstate Commerce Commission has decided. The railroads will be given the usual 45 days in which to remedy the situation, and manufacturers expect to benefit materially by the change. Complaint was brought by the Traffic Bureau of Jackson, Miss. It was found that news print shipped by rail, barge and rail could be delivered 6 cents a hundred cheaper to Memphis, Tenn., than if sent all rail. The differential on wrapping and other kinds of paper taking the same rating was 6.5 cents. This condition exists, it is said, because of failure of the carriers to establish rail-barge-rail rates and publish them.

State May Take Over Reservoir

Under a bill which is to be proposed in the Wisconsin Legislature, the state will take over the reservoir systems in which water for almost all the large water powers is controlled. This plan would give the state control over the amount of water supplied to power dams, and regulation would be attempted for the benefit of riparians. The bill is in only its preliminary stages and may not come up for action for some time. The proposal also is advanced that the state put up to a vote of the people the desire to purchase water powers when they became available under the present recapture law, which would cause the water power to be offered the state for purchase at the end of a thirty year period. No power will be available for purchase until 1946, because the recapture law has been in effect only a few years.

Rudolph Meyer, manager of the Marathon Paper Mills Company's mill at Ashland, Wis., has resigned, and will become manager of the Badger Paper Mills Company, of Peshtigo, Wis. He will be succeeded by Henry Josephs, former manager of the Daniels Manufacturing Company, Rhinelander, Wis. In his new connection, Mr. Meyer will help to place the Peshtigo pulp and paper mills in operation after the shutdown entailed by the recent sale.

The Wisconsin Supreme Court has reversed decision in a case which would have required the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., to pay damages of $2,000 to Mr. and Mrs. John A. Benka because of the flooding of their lands by one of the power dams. The lower court held that payment should be made, but the supreme court ruled the only remedy was by condemnation upon the part of the plaintiffs.

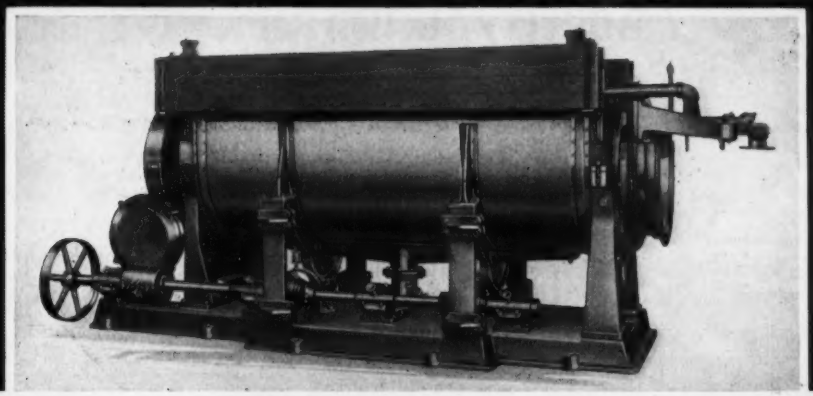
Concern has been expressed over the condition of W. L. Davis, president of the Dells Pulp and Paper Company, Au Claire, Wis. Mr. Davis submitted to an emergency operation for appendicitis at St. Petersburg, Fla., and his condition has been regarded as critical.

Swedish Pulp Exports Increase

WASHINGTON, D. C., April 10, 1929.—Swedish pulp exports during January, totaled 94,463 metric tons comprising 14,624 tons (dry weight) of mechanical ground wood, 51,615 tons of unbleached sulphite, 9,217 tons of bleached sulphite, and 19,007 tons of unbleached sulphate pulp. During the corresponding month of last year the total shipments in this class reached 24,772 tons. Exports of paper, which amounted to 36,205 tons, also increased although less notably than in the case of wood pulp. The bulk of the shipments consisted of news print and wrapping paper.

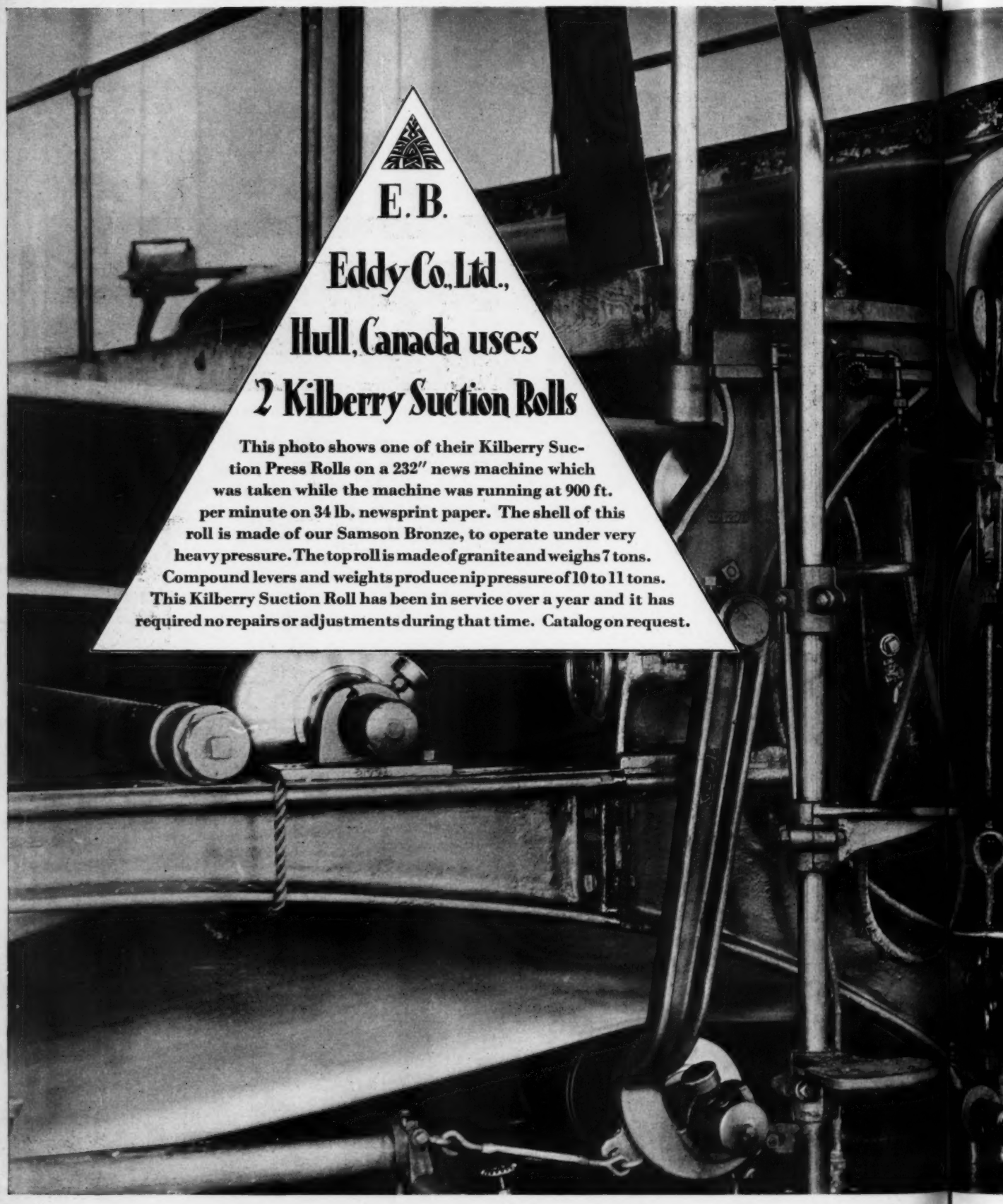
The BIRD SCREEN

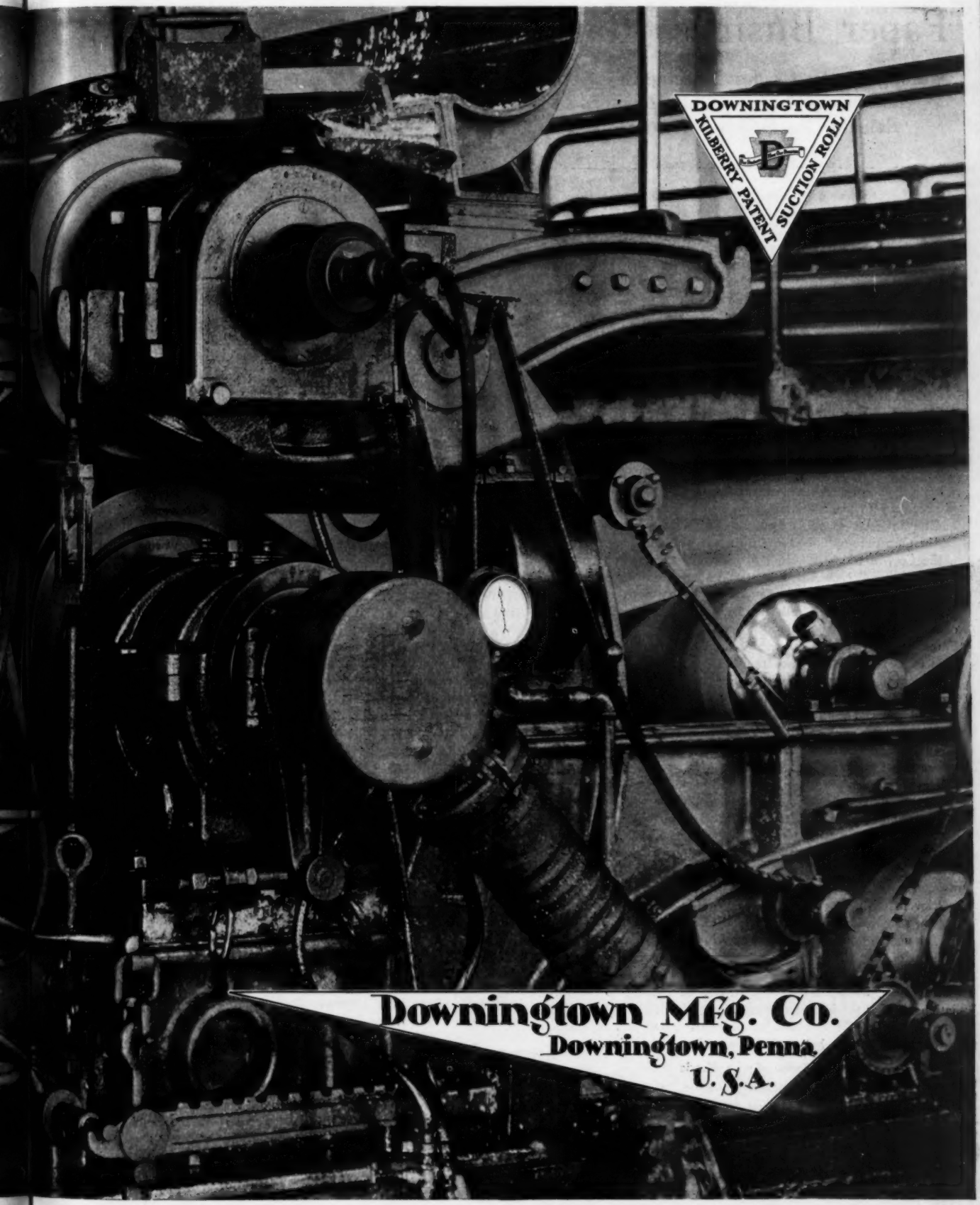
Success MEANS Something



The Bird Screen represents the most practical and successful paper screen ever designed plus the applied experience gained from hundreds of installations.
It has proved itself to be the screen that most paper makers want.
Let us show you exactly what this means to you.

BIRD MACHINE COMPANY
South Walpole .·. Massachusetts


E. B.
Eddy Co., Ltd.,
Hull, Canada uses
2 Kilberry Suction Rolls
This photo shows one of their Kilberry Suction Press Rolls on a 232" news machine which was taken while the machine was running at 900 ft. per minute on 34 lb. newsprint paper. The shell of this roll is made of our Samson Bronze, to operate under very heavy pressure. The top roll is made of granite and weighs 7 tons. Compound levers and weights produce nip pressure of 10 to 11 tons. This Kilberry Suction Roll has been in service over a year and it has required no repairs or adjustments during that time. Catalog on request.


DOWNINGTON
KILBERRY PATENT SUCTION ROLL
D
Downingtown Mfg. Co.
Downingtown, Penna.
U. S. A.

Paper Business Rather Irregular in Chicago

Although Better Grades Continue In Excellent Request, Ground Wood Specialties Are Only Moderately Active—While Paper Board Market Experiences Heavy Demand, Prices Remain Unsatisfactory—News Print In Good Position as Production Is Controlled

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., April 15, 1929.—Some degree of slowness was indicated in reports on business conditions in Chicago paper channels during the past week. This slowness was noted particularly in ground wood papers, with the better grades of paper, including bonds, ledgers, coated papers, etc., running seemingly quite to the contrary with business brisk in sharp contrast to the somewhat dull demand in the cheaper papers.

One of the bright spots continues to be news print where no uncertainty now exists, prices seem to have become stabilized and production well controlled. In the board market the unique condition of good demand and unsatisfactory prices still continues, according to reports, and board merchants are hoping that prices will improve within a short time. Book papers continue at a fairly brisk pace with the fine paper market entering the second quarter of the year with quite promising conditions existing. Demand is strong here and prices stable. Tissues slowed down somewhat after Easter but are again giving promise of future strength.

With conditions in the better grades of paper improved all that is necessary to place the Chicago paper business for the second quarter in good shape is to bring the cheaper grades into line. In the meantime optimism in all lines is worth noting.

Jim Coy, of the Flambeau Paper Company, former president of the Salesmen's Association of the Paper Industry, still retains the greatest of interest in the doings of that progressive group of salesmen and is the authority for the statement that the association is trying hard to line up P. H. Whaley, of the Whaley-Eaton Service, for the salesmen's big luncheon event during the time of the Fall Meeting of the National Paper Trade Association, scheduled for Chicago in early October. Mr. Whaley's firm provides a political service and his insight into affairs at Washington and forecasts as to what may happen makes him a peculiarly interesting and educational speaker. The association greatly enjoyed his address at the annual meeting and are trying hard to secure him again.

Tom Donahue, of the Warren Manufacturing Company, is again chairman of the Golf Committee and is already preparing the most tempting bait for the first of the popular tournament series to be held sometime in May. Tom provided some gala events last season and his past work is sufficient to create plenty of anticipation in the hearts of the members of the Chciago division.

Prior to the next regular meeting of the Chicago Paper Association, scheduled for Tuesday, April 23, at the Bismark Hotel, a special meeting has been called for April 18, according to Leo Altholz, of the Inlander-Steindler Paper Company, president of the association, which will engineer a slight change in the program, which, when made public, will be of interest to the association and for the benefit of the industry in this market. Whatever the change, it is bound to be constructive and in keeping with the progressive habits of the growing Association.

News of the Trade

Illinois business organizations continue in their efforts to stimulate the use of paper made from cornstalk pulp. Mention has already been made of the efforts of the Northern Bank Note Company to interest banks in this paper. Now the Hartman Printing Company, of Springfield, Ill., comes along with a letterhead and letter embossed and multigraphed on cornstalk paper with the information that all grades of cornstalk paper are kept in stock suitable for advertising matter and for stationery. Which provokes mention that the new grade of news print in much improved according to many Chicago paper men.

A beautifully prepared sample booklet giving an advance showing of Strathmore Wayside Text has been sent out by the Paper Mills' Company, Chicago distributors, to the Chicago printing and advertising trade. The paper is characterized as new and with new dainty colors and a fine plate finish for half-tones on real Laid paper, a charming Antique furnished in White and Ivory. Samples of Wayside Text are included for White Wove Antique; White Wove Plate; White Laid Plate; Ivory Wove Antique; Ivory Laid Plate; Marine Laid Plate; Gray Dawn Laid Plate; Old Blue Laid Plate; Tawny Laid Plate and Sundown Laid Plate.

Boston Paper Trade Happenings

BOSTON, Mass., April 15, 1929.—John F. Kuster, treasurer of the Andrews Paper Company, accompanied by Mrs. Kuster and his son, John F. Kuster, Jr., and Mrs. Lena F. Andrews, have returned from a week's trip to Washington, D. C., West Point and Philadelphia.

H. J. Davis, treasurer of the Davis Paper Company, West Hopkinton, N. H., box board manufacturers, has returned with his family from Pasadena, Cal., where they have been for two months. On the way to California, they were caused some delay, due to the fact that the boat ran ashore in the vicinity of the Canal Zone. With other passengers they were obliged to be taken off the boat and go to a hotel.

Clyde B. Morgan, treasurer of the S. D. Warren Company, is to be a member of a party of New England business men, who are to make a national "land cruise", visiting several prominent cities of the country, under the auspices of the Boston Chamber of Commerce. The party, under the leadership of E. C. Johnson, vice president of the Chamber of Commerce, leaves April 21.

Max Zimmerman, manager of production of the United Paperboard Co., was at the Boston office of the company last week.

R. H. Spaulding, president of the Spaulding Fibre Company, was recently in Boston, on his way to Tonawanda, N. Y., where a mill of the company, manufacturing rag vulcanizing and insulating paper, is located.

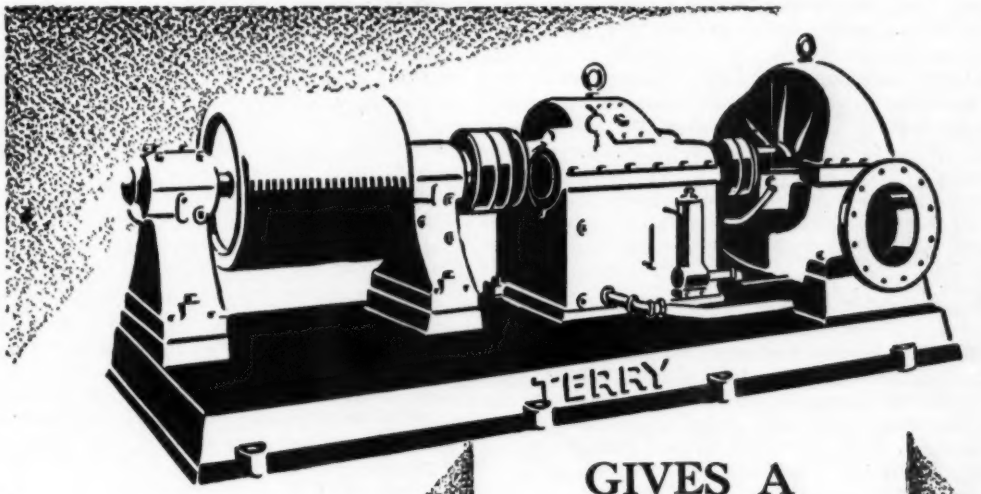
J. A. Garvey, personnel manager of the Dennison Manufacturing Company, Framingham, Mass., was a speaker at the annual meeting and dinner of the Boston Chapter of the American Statistical Association, at the Boston City Club Friday evening.

The officers of the Forest Paper Company, that recently acquired a plant at Yarmouth, Me., to manufacture corrugated and fibre shipping containers, folding boxes, paper board and specialties, are as follows: F. B. Oldham, president: Mark L. Hersey, treasurer; Ralph O. Dale, secretary. Directors: F. B. Oldham, Joseph A. Warren, Carl F. True, Ralph O. Dale. Managing directors: American Industrial Company. It is reported that one of the products will be sardine containers.

To Limit Ground Wood Production

WASHINGTON, D. C., April 17, 1929.—Representatives of Norwegian, Swedish and Finnish ground wood producers at a meeting in Stockholm on April 6 concluded an agreement whereby the limitation on this class of pulp will be continued, according to a radiogram from Commercial Attache Lund, at Oslo. At the same time close cooperation in regard to selling policies and prices will be put into effect. World prices for ground wood are expected to show a firmer tone following this action.

The Terry Paper Machine Drive



GIVES A WIDE SPEED RANGE

The Terry Paper Machine Drive can be furnished to operate over any speed range up to 1 to 10. This permits the production of a greater variety of products. Light weight or heavy weight paper can be manufactured without any change in the driving equipment other than a small governor adjustment.

A Terry engineer will be glad to explain the operation of the Terry wide range governor and any other points connected with the design and application of the Terry drive.

The Terry Steam Turbine Company

TERRY SQUARE, HARTFORD, CT.
OFFICES IN PRINCIPAL CITIES

Steam Turbines + Gears + Shaft Couplings

T-1029

Ontario Mills to Make Paper from Wood Waste

Plan Announced by E. E. Johnston For Number of Plants to Transform Little Used Varieties of Native Woods Into Book and Kraft Papers and Insulating and Building Boards—Option Secured On Several Port Arthur Properties As Proposed Site For Mills

TORONTO, Ont., April 15, 1929.—To utilize what is now waste material of the products of the forests of northwestern Ontario which annually amount to millions of dollars and to use other raw materials of merchantable timber species, E. E. Johnston, head of the Pigeon Timber Company, of Port Arthur, Ont., announces plans for a number of mills to transform wood wastes and other timber to saleable product. The plan, as outlined by Mr. Johnston, is to manufacture little used varieties of native woods, such as jackpine, birch, poplar and balsam, which have for their base a fibrous substance, into book papers, rough and kraft papers, insulating and building boards. An option has been taken on several properties in Port Arthur as proposed sites for the mills and the capital outlay will amount to approximately $3,000,000. Mr. Johnston says he has interested United States capital. The company also has plans for the development of power on the Pigeon River. Application is to be made to the Ontario Government for additional timber areas.

Big Paper Machine in Operation

In the presence of mill, construction, manufacturing and company officials the mammoth new paper machine of the Great Lakes Pulp and Paper Company, Ltd., at Fort William, Ont., was put through its preliminary tests a few days ago. It performed to the utmost satisfaction, it is announced by J. T. McLellan, general manager in charge of construction. Started at 4 o'clock in the afternoon the giant piece of machinery, whose dimensions make it the largest of its kind in the world, operated without interruption for one hour and a half. Power was then shut off and all apparatus was examined. Apart from members of the mill and construction staffs, other officials present were Daniel McLeod, vice president of the company; R. W. Andrews, chief engineer; Messrs. Gates, Ross and Richards, of the general Electric Company of Canada, whose firm installed much of the machine's equipment. It is announced that within another four or five days the machine will again be tested and then will follow a period of operation to work in all bearings and tune up other apparatus. The 19th of the month has been set for a start at regular news print production. The successful operation of the 304-inch machine, with a maximum daily production of 210 tons, is considered a triumph of modern engineering science. Its erection was based on a definite schedule of progress, declared Mr. McLellan, and four months ago officials set April 5 as the day of the initial test. The whole program was worked out to the most minute detail, the machine being in complete condition for the test within the hour scheduled. The original plans of the Great Lakes Paper Company, which is owned by the Backus-Brooks interests, call for a news print mill with an annual capacity of 100,000 tons. At its present rate of progress it will not be long before the company achieves that objective.

Warwick's Fine Showing of Papeteries

Each year at this season Warwick Bros. & Rutter, Ltd., King street West, Toronto, stages a showing of papeterie lines and stationery developed during the season for the ensuing Christmas trade. This year's display is an especially attractive one and represents remarkable development and advancement in styles of packaged stationery in which artistic effects have been atained in fancy stationery and papeteries prepared for Christmas gift lines. Warwick's De Lux Holiday papeteries replace hitherto well-known standard lines with new creations and colors, designs and dressings have kept pace with the demand for the artistic and the showy. One of the most outstanding features of the exhibit is the Thatchweave series which is an entirely new treatment of writing papers in which a fine writing surface has been produced on a stipple finished sheet, while under the general title of "Lettres Moderne" the new Egyptian double tone border series, with artistic dressings, is shown in various hues, with some very fine art work displayed on the box coverings and linings. Lotus Lawn is one of the firm's most popular priced series and this has been produced in a new design and striking cover paper. In connection with the exhibit Warwick Bros. & Rutter have sent out a very attractive circular to the trade under the title "Modern Merchandise For Modern Times", the cover of which contains a reproduction of "Lettres Modernes", line of papeteries which features the showing. Harry C. Woods, general manager of the firm, has developed the papeterie and stationery ends of the company's business and his salesmen are covering the Dominion from coast to coast with their De Lux lines for the Christmas trade.

Safety Work in Ontario Paper Mills

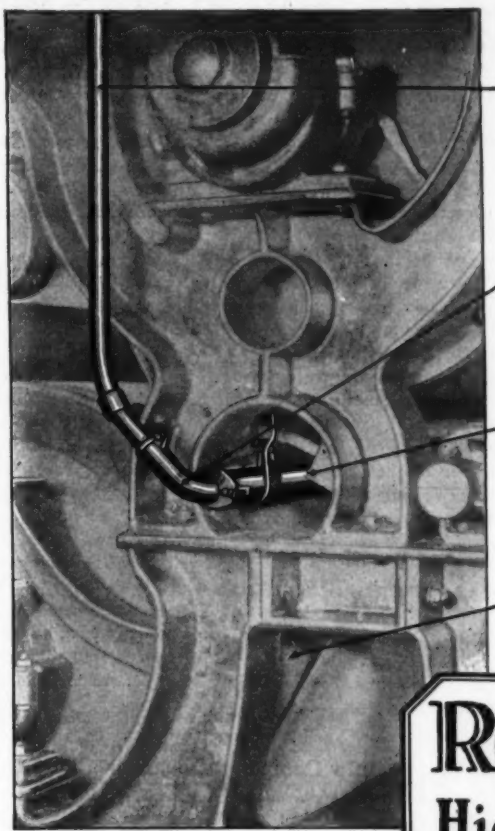
A good representation of executives of pulp and paper mills in the province was present at the annual meeting of the Ontario Pulp and Paper Makers' Safety Association at the King Edward Hotel, when following the dinner reports were read indicating an even more favorable record in accident prevention for 1928 as compared with the preceding year. The president, H. St. John Jarvis, presided and the chief speakers were V. A. Sinclair, K. C., chairman of the Workmen's Compensation Board; F. E. Dean, chief statistician, and Alexander White, chief sanitary inspector. Directors were elected and these in turn will appoint the officers at a later meeting. Trophies were presented to the winning safety competition teams, the McInnes trophy going to the Cornwall Division of the Howard Smith Paper Mills.

New Wholesale Paper Firm

Announcements have been mailed out to the Canadian printing trade of the incorporation of Canada Paper "Wholesale" Ltd. to carry on and extend the distribution of the various papers formerly distributed by Canada Paper Company of Toronto and Montreal. Larger and more complete stocks of improved products, it is stated, will be carried to further the service of the new company to Canadian printers, lithographers and paper box makers. The company has been successful in retaining H. B. Donovan as president and managing director. Well and favorably known to the paper trade from coast to coast, Mr. Donovan came to Canada from the Old Country as a young lad, previously having had a few years' experience in the paper trade over there. He linked up with the Canada Paper Company for forty-seven years, having risen from a warehouse boy to the position of sales manager. The Toronto office of Canada Paper "Wholesale" Ltd. is at 109 Simcoe street.

May Acquire Part of F. N. Burt Business

At the annual meeting of the shareholders of F. N. Burt Company, Ltd., in Toronto a few days ago, S. J. Moore, the president, stated that the directors have under consideration a proposal to transfer the sales book and continuous form business, which the company carries on in Canada, to the Moore Corporation. This part of the Burt business represents a small proportion of its total. Under this proposal the F. N. Burt Company would receive shares of the Moore Corporation on the same basis as that upon which the three units now composing the Moore Corporation were brought together. It is understood that the


Small sized pipes that do not interfere with threading, removing of broke, etc.
Nozzles enter alternate vapor pockets from front and back of machine.
Nozzles blowing vapor away from center insuring even drying across sheet.
Vapor being blown away from dryer felts greatly increases life of felts.

ROSS-GREWIN High Pressure System

Quickly Installed

The complete installation of a Ross-Grewin system can be made on your present machine during regular weekend shutdown without slightest loss of production.

This modern system effectively removes vapor by small high pressure jets of heated air blown at high velocity into alternate vapor pockets. Installations have clearly demonstrated its advantages in assuring more even drying; increased drying capacity; reduction of felt costs; minimum amount of steam and power necessary to operate; minimum space requirements.

Diagram showing general arrangement of system complete will be sent on request.

J. O. ROSS ENGINEERING CORPORATION

208 W. Washington Street
CHICAGO

Main Office—122 E. 42nd Street
NEW YORK

519 American Bank Bldg
PORTLAND, ORE.

ROSS ENGINEERING OF CANADA, LIMITED

NEW BIRKS BLDG., MONTREAL

ROSS SYSTEMS
HEATING—VENTILATING—DRYING

Moore Corporation's plans call for important expansion in Canada. Through ownership of a substantial holding of Moore Corporation shares, F. N. Burt Company would then be interested in the sales book and continuous form business not only in Canada but throughout the entire continent. If this proposal takes definite form a special meeting of shareholders of F. N. Burt Company will be called at an early date. It is pointed out that this in no way affects the main business of the F. N. Burt Company, Ltd., which is the manufacture and sale of paper boxes in Canada and the United States.

Pulp Mills for Manitoba

According to word from The Pas, Manitoba, preliminary negotiations are now proceeding between a company headed by Sir Reginald Baird, president of Lloyd's Bank, and the Manitoba Government, which may lead to the development of White Mud Falls and the establishment of important industries in the neighborhood of White Mud. It is known that representatives of the company have been in that part of the country for some time quietly securing data regarding the amount of power available and the amount that could be sold in Northern Manitoba. This data has been supplied to Sir Reginald Baird and his associates, and it is expected that the question of the falls will be brought up in the Provincial Legislature during the present session. Development of the falls would mean an outlay of about $50,000,000 according to experts who have studied the problem, and the amount of power available without damming of the river is approximately 300,000 h. p. It is stated that the plan of the English company is to supply power to all the mining companies now engaged in development work in the vicinity of White Mud, also the towns, including The Pas and Cold Lake. While the 300,000 h. p. greatly exceeds the amount of power now required in the Cross Lake, Oxford Lake, Herb Lake and Cold Lake territories, it is understood the company has secured valuable pulpwood lands in the neighborhood and that it is the intention later to build pulp mills in the country, which would utilize a great deal of the surplus power. A significant fact, and one which would suggest that news of the forthcoming application for the lease has leaked out, is that Winnipeg interests have been securing very short term options on property in the Cross Lake and Herb Lakes vicinity. It is evidently expected that the matter will be brought to a head in the Manitoba Legislature before the options expire.

Notes and Jottings of the Trade

The Mille Roches plant of Provincial Paper, Ltd., was closed down for a week recently during which time the Dominion Government had a force of men at work cleaning out the canal. It is expected that the Cornwall mill of the Howard Smith Paper Mills, Ltd., will be similarily affected shortly.

S. F. Duncan, president of Provincial Paper, Ltd., has returned to Toronto after a holiday outing spent at Pinehurst, N. C., where he met George C. Winlow, of the Alliance Paper Mills, Toronto, who also enjoyed a short stay at the popular resort.

Buscombe & Dodds, waste paper collectors from the printing and wholesale paper trade in Toronto, operating from 255 Wellington street West, are considering the purchase of a site for larger warehouse space. The company has recently put on four new trucks on pick-up and are handling 40 tons of waste paper a day. New balers have also been installed.

E. H. Smith, managing director of the Howard Smith Paper Mills, Ltd., Montreal, was a recent business visitor in Toronto.

Howard Smith Paper Mills, Ltd., and Courtauld's (Canada) Ltd., welcomed a party of chemistry students from McGill University and Ecole Polytechnique at their Cornwall plants a few days ago. There were nine students from each college, including social workers in the Research Institute. Officials of both plants explained the various processes to the students.

Fred W. Halls Paper Company, of Toronto and London, Ont., has produced a very attractive folk-letter on the "Dummy Service" the concern provides for printers and their customers. It is printed on Howard Smith's deckle-edge Bard-of-Avon and shows how the paper dealer has to do with five of the eight styles in the preparation of the order—namely, the size, form, color, weight and quality of paper. The other items are copy, art work, and type.

L. H. Shipman, of the head office of the Abitibi Power and Paper Company, recently spent a few days in Fort William and Port Arthur on business. W. J. Hussey, formerly of Espanola, has been appointed manager of the Thunder Bay Paper Company, mill, following the resignation of Mr. Jackson. C. N. Belden succeeds Mr. Hussey as general superintendent of the Espanola Division of the Abitibi Company.

Arthur L. Dawe, former secretary of the Canadian Pulp and Paper Association, has offered a medal to be awarded for the best paper contributed by a member of the Technical Section of the Association at the annual meeting. The executive Council has gratefully accepted Mr. Dawe's offer and has appointed a committee to prepare rules to govern the award.

Schultz Construction Company, Ltd., Brantford, Ont., has work well under way in the construction of a $20,000 addition to the plant of the Superior Paper Mills Company, of Thorold, Ont. The owner of the plant is the Brantford Roofing Company, who will make roofing and specialty papers.

Preliminary work including excavating is now under way in connection with the construction of a new paper mill for the James McLaren Lumber Company, Ltd., at Buckingham Junction, Que., the general contract for which is held by the Foundation Company of Canada, Ltd., 764 Sherbrooke street West, Montreal.

Contract has been awarded to Arthur Leduc for construction of a factory building on LaSalle street, Montreal, for the King Paper Company, Ltd., 2362 Lasalle street. The building will cost approximately $55,000.

Pulp Company Discusses Capital

[FROM OUR REGULAR CORRESPONDENT]

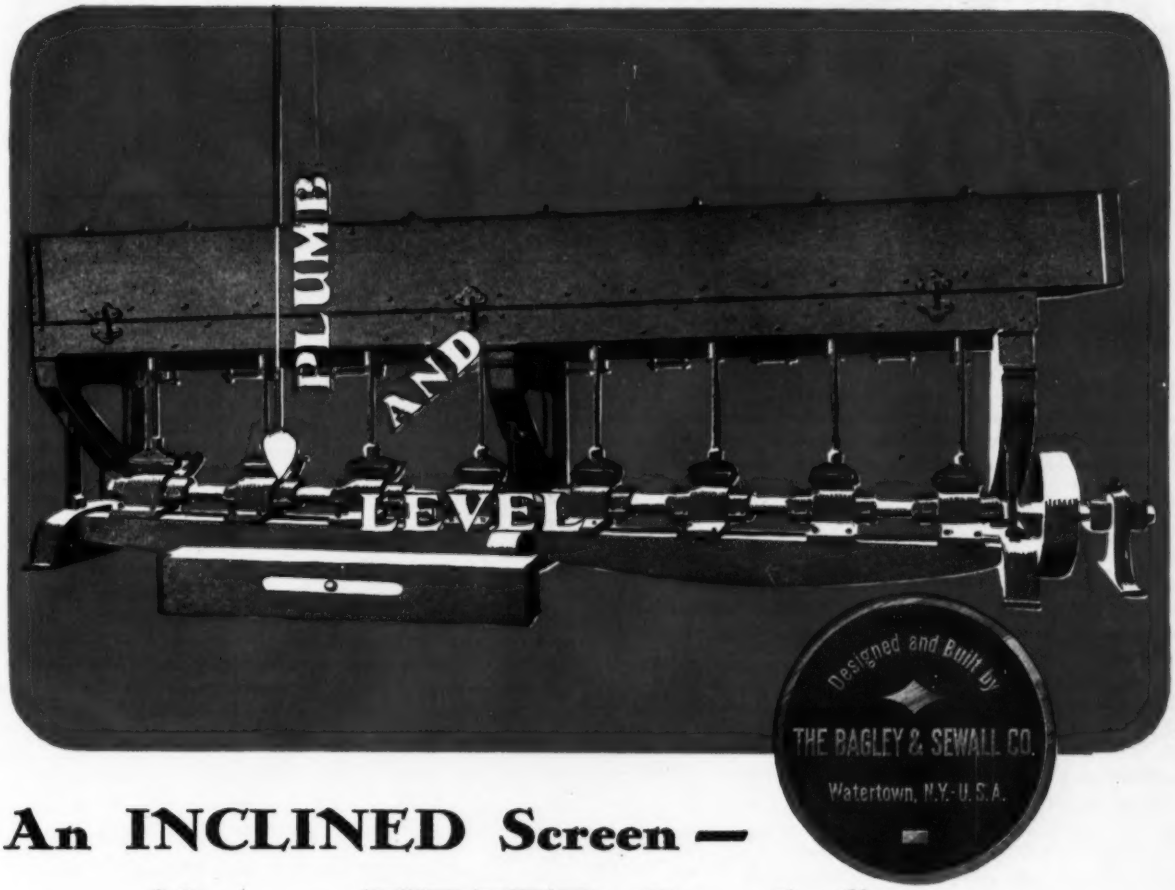
PORTLAND, ORE., April 15, 1929.—Tentative capital structure of the new Puget Sound Pulp and Timber company and the terms under which the new company acquired the Fidalgo and San Juan Pulp Manufacturing companies the Clear Lake Lumber company and the Rucker timber interests, were disclosed April 1 after a meeting held in Seattle March 30, attended by directors of the new corporation.

The recently announced mill to be built at Everett, Wash., at a cost of $3,000,000 for the manufacture of bleached sulphite pulp, will be started within ninety days. This plant will have a capacity of 150 tons daily to supplement two acquired mills at Anacortes and Bellingham, which have a combined capacity of 140 tons daily.

Capital of the new corporation will comprise 95,000 shares of preferred stock of $100 par and 95,000 shares of no-par common. One share of common will be given with each share of preferred, it was disclosed by stock holders, with $4,500,000 of the preferred and 45,000 shares of the no-par common exchanged for the acquired companies.

The exchange is figured to provide $1,500,000 of preferred and 15,000 shares of common for the Clear Lake Timber company and its railroad; $1,800,000 of preferred and 18,000 shares of common for the San Juan and Fidalgo mills; $1,200,000 preferred and 12,000 common for the Rucker properties and railroad and timber holdings between Hartford and Monte Christo. The Rucker railroad taps vast government timber preserves.

The remaining $5,000,000 of preferred and 50,000 shares of common would be sold to provide the needed $3,000,000 for construction of the new plant, working capital and possible expansions, although there is a possibility that bonds may be issued in lieu of the entire $5,000,000 of preferred, according to one report. It is also said that the financing may be accomplished privately without a public offering of stock or bonds.



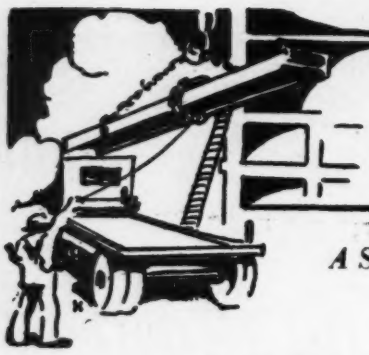
An INCLINED Screen — Not a TILTED Level Screen

You can't make a successful inclined screen by just raising the end of a level one. The patent-protected Harmon Inclined Screen, made exclusively by Bagley & Sewall, is *built inclined.* Advantages?—Piston shafts are *perpendicular*, working straight and true; shoes follow cams unfalteringly, without side slip or excessive wearing friction. Specially ground chilled cams, each operating its own vacuum chamber, give a sharp upward blast that cleans the slots, and a slow downward draw that brings through the maximum amount of stock. *Stock keeps moving* without plugging or overflow, without slugs or slime, without supplemental agitation. Showers are unnecessary, saving water, piping and pumping. Dirt flows off at low end, without raking. All in all—a lot more stock, a lot cleaner stock, a lot less power—a lot more satisfaction.

There's more we'd like to tell you. Write us.

The Bagley & Sewall Co.

Watertown, N.Y.



CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Detroit, Mich.—The Detroit Wax Paper Company, 547 Harper street, has approved final plans for a new mill for the manufacture of wax paper and other processed stocks, cardboard, etc., on tract of 6 acres of land at River Rouge, recently acquired, and has awarded general building contract to the J. A. Utley Company, Penobscot Building, Detroit. The new plant will consist of a number of units, with main structure, 210 x 600 feet, and is reported to cost close to $600,000, with equipment. Following completion, scheduled during the summer, the company will remove its Detroit mill to the new location, where operations will be concentrated in the future. Large increase in present capacity wil be made.

Seattle, Wash.—The Pacific Straw Paper and Board Company, 2950 East Marginal Way, has awarded a general contract to C. J. Strandberg, 5633 Fifth Street, N. W., for a new one-story addition to its mill, to be used primarily for warehouse and distributing service. It will be about 20 x 100 ft.

Camas, Wash.—The Crown Willamette Paper Company, 248 Battery street, San Francisco, Cal., will break ground before the close of the month for its proposed additions to mill at Camas for which a fund of about $4,000,000, has been arranged. The work will include a new bleach sulphite pulp mill, paper-making unit, converting mill and miscellaneous auxiliary structures; the wood pulp storage division will be rebuilt and extended, and improvements made in the water supply system. The new units will provide for large increase in present capacity, and it is currently reported that the company will discontinue news print manufacture at this plant and will produce high grade paper stocks in the future. The new converting mill will be equipped for the production of paper towels and kindred specialties. Completion of the program is scheduled early next January and will add about 200 employees to the present working force of more than 1000 men. The Camas mill has been furnishing a considerable tonnage to the Western Waxed Paper Company, an affiliated organization, and upon completion of the new additions it is proposed to increase this distribution. V. D. Simons, 431 North Michigan avenue, Chicago, Ill., is paper mill engineer in charge.

Scranton, Pa.—The Federal Gummed and Coated Paper Company, recently organized by Guy L. Culver, 1622 Capouse avenue, and associates, is said to be planning the early operation of a local plant for the production of gummed and coated paper stocks. Edward W. Hague, Scranton, is also interested in the new organization.

International Falls, Minn.—The Minnesota and Ontario Paper Company, Minneapolis, Minn., has approved plans for a new steel frame addition to its mill at International Falls, and will proceed with superstructure at an early date. It is reported to cost more than $150,000, with equipment, and will provide for considerable increase in present output. Contract for structural steel has been awarded to the Minneapolis Steel & Machinery Company, Minneapolis.

West Springfield, Mass.—The General Fibre Box Company, recently acquired by the Longview Fibre Company, Longview, Wash., and now operated as a subsidiary organization, has awarded a building contract to A. L. Phelps, Avon Place, Springfield, for a proposed new addition to its mill, to consist of two new units, reported to cost more than $75,000, with equipment. Considerable increased capacity will be developed. Superstructure will be placed in progress at once.

San Francisco, Cal.—The Consolidated Paper Box Company has authorized an increase in capital from 120,000 to 200,000 shares of stock, a considerable portion of the fund to be used for general expansion and improvements, including plants both at San Francisco and Oakland. As recently reported, the company is perfecting plans for taking over two local folding paper box manufacturing companies, including the Gilbert-Patterson Carton Company, and the York-Stern Paper Box Company, and will develop large advance in output in this line.

Cleveland, Ohio—The Standard Envelope Company, 1600 East 30th street, has approved plans for the construction of a new addition to its plant, and general contract has been awarded to the Uhl-Jaster Company, 2341 Carnegie avenue. It will be one-story, 80 x 115 feet, and reported to cost close to $50,000 with equipment.

Biglerville, Pa.—Rice, Trew & Rice Company, recently organized by A. E. Rice, Biglerville, and associates, is said to be arranging for the early operation of a local mill for the production of paper goods of various kinds. John S. Rice. Arendtsville, Pa. is interested in the new organization, as well as C. Wilkins Trew, Baltimore, Md.

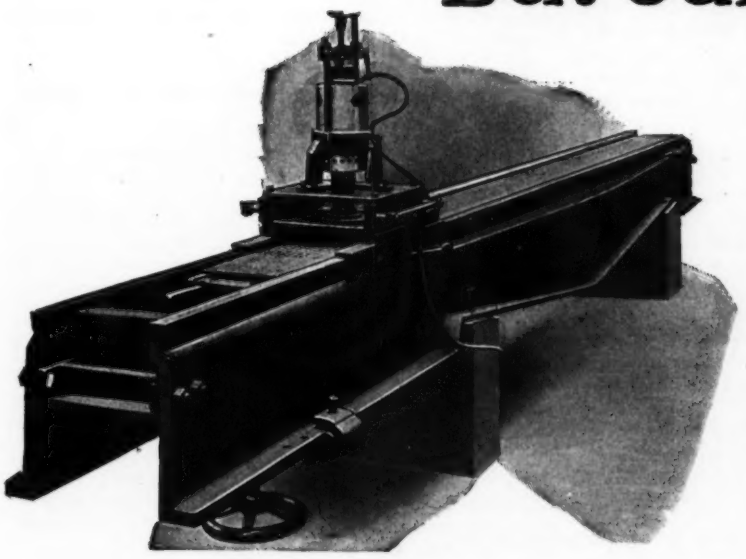
Richmond, Va.—The Standard Paper Manufacturing Company, Hull and Canal streets, will soon proceed with its expansion and improvement program recently announced, reported to cost about $500,000. The No. 3 mill will be extended, and a new paper-making machine installed for considerable increase in present output. It is understood that the program is scheduled for completion this year.

North Pelham, N. Y.—The Sanborn Map Company, 629 Fifth avenue, New York, has had revised plans prepared for a proposed new addition to its paper goods plant at North Pelham, to be two-story, reported to cost close to $50,000, with equipment. Oscar P. Cadmus, 157 East 44th street, New York, is architect, in charge.

Durham, Pa.—The Endura Manufacturing Corporation, recently chartered with a capital of $80,000, will operate a local mill for the manufacture of paper products of various kinds, including fibre goods. It is expected to develop a large capacity. The company is headed by Charles A. Miller and Webster S. Achey, both of Doylestown, Pa.; and Clarence A. G. Pease, Winchendon, Mass. The last noted will be treasurer.

Milwaukee, Wis.—The American Lace Paper Company, 908 Juneau avenue, is pushing construction on its proposed new mill addition, recently reported in these columns, and work on pouring columns is in progress. The unit will be four-story and basement, concrete, 80 x 320 feet, located on Port Washington Road, and is reported to cost more than $175,000, with equipment. Con-

Only Precision Machine Planing can take these humps off Box Surfaces!



Never can hand planing secure a uniform surface—there are still "humps" on the surface when the workman is through. But, hand planing is obsolete—not the 1929 way of planing box covers. The 1929 method is the Valley Suction Box Planer, which substitutes precision machine methods for variable hand planing — which takes the "humps" off box surfaces and secures for you the factory-made surface—without variations of any kind.

—and, the Valley Suction Box Planer not only does the work accurately—but does it quickly. The time saved is an operation item worth considering. Machine planing costs less all around than hand planing.

The Valley Suction Box Planer is electrically driven, and so compact that it can be located in any convenient place in your mill.

Send for this Booklet

It describes in detail the Valley Suction Box Planer—free upon request.

Write today for complete details.

VALLEY IRON WORKS CO.

Machinery for Paper and Pulp Mills

APPLETON WISCONSIN

New York Office: 350 Madison Avenue
Western Manufacturing & Sales Division: Smith & Valley Iron Works Co. Portland, Oregon

tracts for plumbing and other finishing work are being let. Richard Philipp, 405 Broadway, is architect.

Dalhousie, N. B.—The Canadian International Paper Company, Montreal, Que., is said to have plans maturing for increased production at its local news print mill, and will carry out a general expansion and betterment program this spring. It is reported that facilities will be provided for the employment of close to double the present working force of 800 men, or for approximately 1500 operatives.

Philadelphia, Pa.—The Central Paper Box Company, Philip street, near Second street, is said to be planning the early rebuilding of portion of plant destroyed by fire, April 3, with loss including equipment and stock. An official estimate of loss has not been announced.

Lee, Mass.—The Smith Paper Company has approved plans for a new addition to its mill, to be two and three-story, 70x170 feet, and 60x100 feet, to be used primarily for enlarged output. The expansion is reported to cost more than $150,000. General building contract has been let to the Lunch Construction Company, 225 High street, Holyoke, Mass.

New York, N. Y.—A. Weitzman's Sons, Inc., has been organized with a capital of $50,000, to take over and expand the company of similar name, with headquarters at 41 Great Jones street, specializing in paper goods of various kinds, wrapping papers, etc. The new organization is headed by Max, Irving and Sidney Weitzman.

Chicago, Ill.—The Safekay Container Corporation, Laflin and Jackson boulevards, recently formed by I. S. Blumenthal and Lewis Bennett, is reported planning early operation of a local plant for the manufacture of corrugated boxes and containers.

New York, N. Y.—The Strand Paper Box Corporation, recently organized, has leased space in the building at 133 West 19th street, and will establish a new plant at that location for the manufacture of paper boxes and cartons of various kinds.

Chicago, Ill.—The St. Regis Paper Company, Watertown, N. Y., has taken title to the local four-story plant of the Bates Valve Bag Corporation, in which it recently secured a controlling interest, on Chicago avenue, 143x829 feet, with warehouse adjoining. Operations will be continued as in the past at that location and it is said that an expansion program will be arranged later. The St. Regis company will also take title to nine other factories of the acquired company in different parts of the country.

New York, N. Y.—The William G. Willmann Paper Company, 51 Beekman street, has leased the entire building at 530-36 Canal street, 60x80 feet, and will remodel and improve for new headquarters. The present plant will be removed to the new location and storage and operating facilities increased.

Newark, N. J.—Frederick von Osten, Newark, has leased space in the building at 16 Main street, and will install equipment for a plant to manufacture a new fibre-working machine and parts, including assembling operations. The space totals about 4,000 square feet.

New Companies, Etc.

Boston, Mass.—The Ames Safety Envelope Company has been incorporated with capital of $20,000, to manufacture and deal in paper envelopes and kindred paper goods. The incorporators are A. M. and John W. Fitzgerald, 55 Sudbury avenue, Boston. The last noted is president and treasurer of company.

Philadelphia, Pa.—The Atlas Sample Book Company has been incorporated with capital of $10,000, to manufacture special paper stocks, including sample books, boxes, cards, etc. The incorporators are M. E. Keighton, 1916 Spencer street; and C. and S. Black, 541 Wilder street, Philadelphia. Last noted is treasurer.

New York, N. Y.—A. Weitzman's Sons, Inc., has been incorporated with capital of $50,000, to manufacture and deal in paper and paper goods. The company is represented by J. S. Barshay, 2 Lafayette street, New York.

Chicago, Ill.—P. G. Dallwig, Inc., 105 West Adams street, has been incorporated with capital of 2000 shares of stock, no par value, to manufacture and deal in loose leaf books and other paper products. The incorporators are P. G. Dallwig, R. H. Krammes and Sidney R. Johnson.

Westinghouse Engineers Visit Paper Mills

On February 26, 27, and 28, a group of Westinghouse engineers and sales engineers met at Tyrone and Williamsport, Pa., to discuss recent developments in electrification of paper mill machinery, and to visit mills of the West Virginia Pulp and Paper Company and the New York-Pennsylvania Paper Company in which Westinghouse equipment of recent design has been installed. The group consisted of 35 men, including headquarters and field representatives of both engineering and sales departments from all parts of the country. Boston, Detroit, Cincinnati and Chicago were represented. A group from East Pittsburgh was present. Representatives of the Southeastern district were in attendance, as well as men from Syracuse, Dayton, Milwaukee, New York and Pittsburgh.

Meetings were held in the Lycoming Hotel, Williamsport, during which papers were presented by engineers describing such items as the carbon pile speed regulators for single paper machine drives, multiple motor winder drives, dual frequency calender drives, sectional motor paper machine drives, gear units for paper machinery, and other subjects of a similar character.

WESTINGHOUSE ENGINEERS WHO VISITED PAPER MILLS

An important announcement

To be able to serve the rapidly increasing European users of Oliver United Filters there has been formed....

OLIVER UNITED FILTERS LTD.

A British Company with headquarters at

150 Southampton Row, London, W.C.1. England

Manufacturing Facilities — Oliver United Filters are being manufactured in Great Britain for use in the Paper, Sugar, Chemical, Metallurgical and other major industries. Replacement parts and filter cloths can be delivered on short notice.

Territory Served — Competent filtration engineers will serve these industries in Great Britain and contiguous countries.

Research Work — Research engineers, co-operating with those of Oliver United Filters Inc. in the United States, will be in a position to aid industries in adapting filtration to processes needing, but not heretofore using, automatic filters and to improve present filtration practice wherever possible.

Oliver United Products — Oliver Drum Filters, Oliver-United Disc Filters, Oliver-Borden and Sweetland Tube Thickeners, Sweetland and Kelly Pressure Filters, Sweetland Cantilever Filters, United Filter Presses; Vacuum, Centrifugal and Spiral Pumps, Olivite Acid Resisting Pumps; Sweetland Metallic Filter Fabric.

OLIVER UNITED FILTERS LTD.

150 Southampton Row, London, W.C.1.

Factory: **Bradford, Yorks, England**

International Reports $4,706,403 Deficit

The International Paper Company, which was reorganized last November as the International Paper and Power Company by an exchange of shares of the companies, reports for 1928 a deficit of $4,706,403 after depreciation, interest, reserve for Federal taxes and all dividends. This contrasts with a surplus of $49,588 after all dividend payments in 1927. The net revenue available for International Paper's dividends last year was $4,351,767, compared with $5,736,499 in 1927.

In his report to the stockholders, Archibald R. Graustein, president, says the poor showing last year was caused largely by curtailment of production of news print and reduction of prices. Operations of the Continental Bag and Paper Corporation, which was acquired early in the year, contributed to the deficit, he adds, as did the low price of kraft paper. He sees little likelihood of a balance being reached between production and consumption of paper in less than two or three years.

Suggesting that dividends may be discontinued, Mr. Graustein says:

"Dividends on the common, and to some extent on the preferred stock, constitute a drain on the company's surplus account the indefinite continuance of which would not be justified. In view, however, of the estimated progressive increases in earnings, and the conservative basis upon which the company's earnings are presented, the directors have not thought it wise to interrupt the payment of dividends on the company's common stock. This policy should not be taken as a guaranty that dividends will be maintained without interruption since earnings estimates are of necessity subject to fluctuation as business conditions vary.

Prices Believed at Bottom

"Since the beginning of 1928 the company has made substantial reductions in the price of news print in order to meet competition as the market was seriously weakened by overcapacity of the industry. Lower prices and increasing consumption have created a more stable market, and it is expected that there will be no necessity for further price reductions pending the restoration of a balance between supply and demand. Further increase in productive capacity is under construction, but it may be safely anticipated that further new construction will be very materially slackened under the prevailing low price level.

"North American news print production increased 1928 over 1927 by 7 per cent. Consumption did not increase more than 3 per cent, the balance of the increase in production being accounted for principally by exports. As was anticipated, 1929 shows signs of a larger increase in consumption than 1928, but it is doubtful if a balance will be restored in less than two or three years.

"The present price level for news print does not show an adequate return on news print investment and is so low as to render unlikely any further reduction. The realization of this condition is so general as to hold out strong promise of a stable market until the time when a price involving a reasonable profit to the manufacturer may again be possible.

"The increasing efficiency of the company's newly built and acquired news print mills should make a substantial contribution toward offsetting the lower price of news print now prevailing."

Mr. Graustein reports that 94 per cent of the preferred stock and 99 per cent of the common stock of the International Paper Company have accepted the plan for exchange of the shares for preferred and common stocks of the International Paper and Power Company. There were practically no business transactions of the latter company in 1928 other than this exchange of stock, and no separate report is submitted for the International Paper and Power Company, as the report of the International Paper Company is applicable to both corporations.

Financial Statement

Assets of the International Paper and Power Company were increased $15,000,000 last year through the offering of 1,500,000 shares of Class C common stock to common shareholders at $10 a share. At the annual meeting of the stockholders on April 24 they will vote on a proposal to increase the authorized number of Class C shares from 3,000,000 to 5,000,000. At present 2,500,000 shares are outstanding or are reserved for further exchange of the common stock of International Paper Company.

Total assets of the International Paper Company on Dec. 31, 1928, were $383,365,757, of which $5,738,675 was cash. Current assets amounted to $57,736,080, and current liabilities to $38,691,645. Gross sales and receipts were $92,872,321, compared with $65,416,136 in 1927, and gross earnings were $17,604,275, compared with $15,529,859. The deficit arose from increases in depreciation, interest and dividend payments. Dividends on the preferred and common stocks of the company amounted to $9,058,171, compared with $5,686,911 in 1927. Surplus at the end of the year was $18,184, 645, compared with $22,648,543 at the beginning of the year.

The company's production of paper and pulp during 1928 aggregated 1,173,529 tons, compared with 833,933 tons in 1927. These figures are exclusive of pulp manufactured by the company for its own use in the manufacture of paper.

In 1928 3,267 employes of the company subscribed for 10,015 shares of its preferred stock at $94 a share, compared with 3,207 subscribers for 10,830 shares at $100 a share in 1927.

Boston Paper Market Steady

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., April 15, 1929.—Orders for paper, both fine and coarse, are being received in fairly good volume by the trade in this market. Bonds and ledgers are moving well. Kraft is also in good demand.

Prices of box board remain unchanged, although rumors of proposed meetings of prominent manufacturers and manufacturers generally persist. The opinion is expressed by some that it will be a considerable time before prices advance. Present quotations, however, are holding firm, and, if anything, the market is a bit stronger. It is stated that those who sold chip board at $32.50 have withdrawn this price, and that the minimum figure is now $35, with the maximum at $37.50. Filled news board is strong at $37.50, with $40 as the top quotation. Box makers are fairly busy in all lines, with the exception of those for candy purposes. Demand for candy boxes is expected to improve a little later.

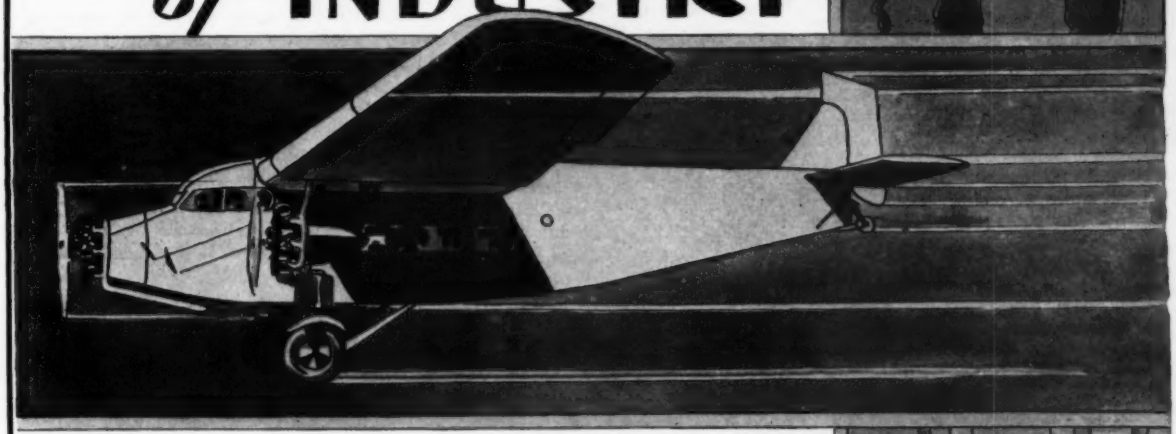
Most grades of old papers are moving at practically the same prices, with a few exceptions. Soft shavings stiffened during the last week, with the quotation of 2.50 to 2.60 for No. 1 soft white very strong. Mills are paying lower prices for No. 1 mixed paper, now quotable at .50 with the tendency downward, compared with a range of 52½ to 57½, previously named.

Both foreign and domestic manila rope show advances, with the range of prices from 4.50 to 5.00 for foreign compared with a previous price of 4.25. Prices vary within this range, some dealers quoting 4.75 to 5.00 and others 4.50 to 4.75. The domestic grade is valued at 4.75, with an upward tendency, compared with a previous price of 4.50. A dealer says that the placing of a big order by a local mill with a concern in Japan has tended to increase the strength of this commodity. It is felt that a heavy demand for manila rope will probably continue for some time. Heavy wool tares have declined from 1.50 to 1.37½.

In old domestic rags, the demand for rag paper is thought to have lifted the price of twos and blues to 2.75 to 3.00 from 2.25 to 2.35. Three cents has been paid for this grade. Repacked thirds and blues have likewise advanced, the quotation now being 2.50, with a rising trend, against a former price of 2.00 to 2.15. New domestic rags and foreign rags continue at the same levels.

The twine market is rather unsteady, slack business leading to keen competition and fluctuating prices.

APACE with the changing demands of INDUSTRY



THE high quality and unvarying uniformity of Diamond Alkalies will always keep pace with the modern demands of industry, regardless of how increasingly large the demand.

A large modern plant, plus a practically inexhaustible supply of the best raw materials, plus a nation-wide system of distribution assures every Diamond Alkali user a dependable source of supply and prompt service all the time—anywhere.

Diamond Alkali Company

PITTSBURGH, PENNA.

P. J. Massey Joins Seaman Paper Co.

Peter J. Massey, until recently first vice-president and general manager of the W. F. Hall Printing Company, Chicago, has been elected to the vice presidency and directorate of the Seaman Paper Company, Chicago, it was announced April 5 by George M. Seaman.

The move is regarded as significant of a new trend in the printing and paper industries to more closely correlate the two from technical and practical angles.

"Bringing one of the outstanding printers into the paper business, in order that he may give it the benefit of his vast technical knowledge of printing, means that the paper industry must give, and is ready to give, the finest obtainable advisory and technical printing service of its clients," Mr. Seaman said.

"In every line of industry", he pointed out, "the realization is sinking in that the problems of the customer must be the problems of the merchant or producer. It is no longer enough to merely sell paper. We must place ourselves in a position to know as much about the use of our product as we do about the product itself. That is the new meaning of service as I understand it."

P. J. MASSEY

Mr. Massey began his printing career with the Butterick Publishing Company, in 1906, as pressroom foreman. Previously he had studied the chemistry of printing and paper making and had served mill and printing office apprenticeship. He went to the Hall Company in 1911 as pressroom foreman and chemist. In 1919 he was editor of *Paper Industry*, and the same year he organized the American Pulp and Paper Mill Superintendent's Association and acted as secretary-treasurer until 1928.

In 1920 he was made production and works manager of the Hall Company, and later was elected to the position of first vice-president and general manager of this company and of the Edward Langer Printing Company, New York, and to the directorate of these and of the Chicago Rotoprint Company, and the Rotoprint Gravure Company, New York.

Mr. Massey views his new connection as an opportunity for even greater service in the printing, paper and publishing world.

"Looking back over the past twenty years", he said "no fact stands out more clearly than the ability of the American public to absorb an ever increasing volume of printed matter. This demand, using the magazine field as an illustration, has caused the development of equipment with speed to turn out three million or more copies of a magazine per week, and the use of single presses that will print fine illustrations in two, four and six colors in one operation with a capacity of 32 to 192 pages at a speed of 3000 to 5000 per hour."

"The ever increasing demand for greater speed of production and better quality of printed matter can be met most satisfactorily and economically for the consumer and the associated industries by coordination of paper and printing knowledge at the source."

"The establishing of 'numerical' values to cover the requirements of the consumer and the processes involved plus the coordinated application of this knowledge at the source, will in a large measure eliminate the troubles experienced at the moment of combining the two arts to produce the finished product, thereby achieving the maximum in Service."

Mr. Massey will take up his work with the Seaman Company at once, it was announced.

Clement-White Trading Co. Formed

HOLYOKE, MASS., April 15, 1929.—Wm. B. Clements and John J. White of Holyoke, have formed a partnership to deal in paper mill supplies such as wires, felts, leather and rubber belting, beater bars, knives of all kinds and chemicals. Both the members of the new firm are well and favorably known to the paper trade.

Mr. Clements was for many years superintendent of divisions of the American Writing Paper Company, Inc., and also assistant general superintendent of the Fitchburg Paper Company mills at Fitchburg, Mass. He was chairman of the Connecticut Valley Division American Pulp and Paper Mill Superintendents Association for the 1927-1928 term and is now a member of the board of Governors of the Division.

Mr. White, or "Jack" White, as he is known to everyone, has been identified with the paper industry practically all his life, as a manufacturer of paper boxes and later as manufacturer of coated papers and was the first chairman of the Connecticut Valley Division of the American Pulp and Paper Mill Superintendents Association, serving two terms and has recently again been chosen to the same office, succeeding Mr. Clements.

Mr. White was chairman of the recent Pittsfield National Convention of Superintendents, and the great success of this meeting was due largely to his efforts.

Clifford W. Higley, Sr. Dead

[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., April 13, 1929.—Clifford W. Higley Sr., prominent in paper manufacturing circles of this section, died during the week at his home here following a brief illness of typhoid fever. The death of Mr. Higley removes one of the most progressive business men in this section of the state. He served as mayor of this place for several terms and only recently was chosen first president of the newly organized Hudson Falls Chamber of Commerce. In late years his ventures in various business enterprises were widespread. At the time of his death he was vice president and a director of the Standard Mill of the United Wall Paper Factories, a vice president and director of the Sandy Hill National Bank and a prominent member of the Hudson Falls Rotary Club. He was also prominent in charitable work giving freely of his time and funds. He was chairman of the Hudson Falls branch of the American Red Cross besides taking an active interest in other organizations of that type. In educational affairs he also played a prominent part as a member of the board of education. The new high school building recently completed at that place was erected partially through his conscientious efforts.

He is survived by two sons and a daughter.

Max Fehringer Leaves Kupfer Bros. Co.

NORTHBRIDGE, MASS., April 15, 1929.—Max Fehringer, chemist, who was for more than seven years superintendent of the Paper coating plant of Kupfer Bros. Company here announced his retirement from this concern.

Making the Products of Tomorrow

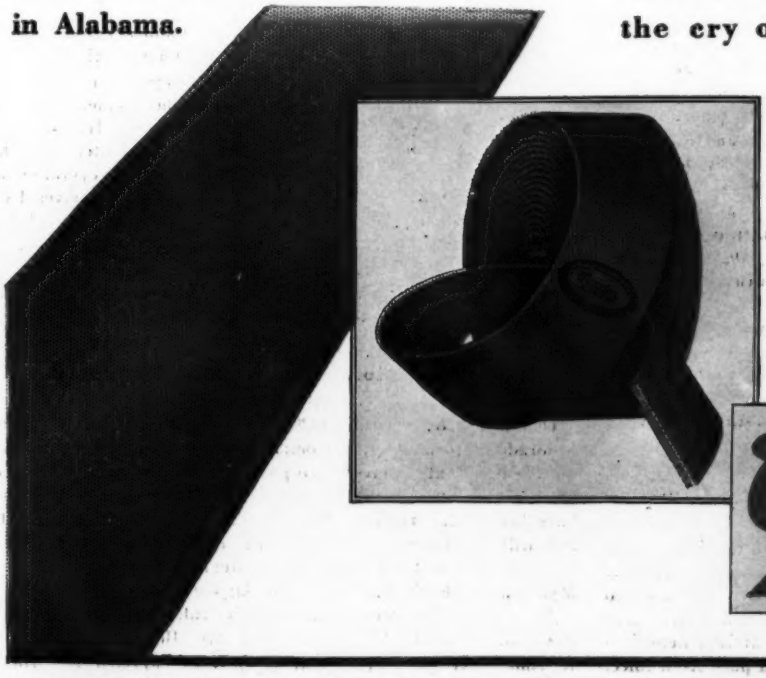
Main drive of a well-known chemical plant in Alabama—65 feet of 20" 6 ply Condor Belt. Motor 150 H.P., 600 R.P.M., motor pulley 28", driven pulley 82". Name of Company on request.

ELECTED to the task of undivided responsibility ... feeding the power demanded to shafts, pulleys, drives.

Power ... fed from a 28" drive at 600 R. P. M.... greedily swallowed by an 82" pulley to distribute where needed.

Such is the duty of the 20" 6 ply Condor Belt shown here—the main drive of a well-known chemical plant in Alabama.

Condor Belt was created twenty-six years ago to fulfill the demand for the best that money could build. It meets the cry of American industry for efficient transmission of power. It hugs pulleys. It spins shafts. It turns the machines of today to make the products of tomorrow.



Condor BELT

THE MANHATTAN RUBBER MANUFACTURING CO.

EXECUTIVE OFFICES AND FACTORIES: PASSAIC, NEW JERSEY . . *BRANCHES IN THE PRINCIPAL CITIES*

Northeastern Power Corp. Makes Good Report

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., April 13, 1929.—The annual report of the Northeastern Power Corporation with which the St. Regis Paper Company is affiliated, was presented at a meeting of stockholders showing gross income from all sources for the year 1928 to be showing consolidated gross income from all sources for the year 1928 to be $17,957,417 and net income after all charges of $10,748,761 equivalent to $3.73 per share on 2,867,557 shares outstanding at the end of the year. The first consolidated annual statement of the corporation included a net profit of $7,833,798 resulting from the sale by the company last April of its entire holdings of New England Power Association common stock. Floyd L. Carlisle, president of the firm, in his letter to stockholders points out that the proceeds of the sale of the common stock of New England Power Association returned more than $23,000,000 to the treasury of the Northeastern Power Corporation which it is using in advances to subsidiaries pending permanent financing in call loans and in purchasing marketable securities.

"At the close of the fiscal year," said Mr. Carlisle, "the current assets and total of securities of non-controlled companies carried on the books of Northeastern Power Corporation and subsidiaries amounted to $30,446,786. If the securities of non-controlled companies had been figured at market value approximately $13,000,000 would have been added to the book value. Holdings of non-controlled companies included 188,768 shares of common stock, 70,000 common stock purchase warrants and 35,000 shares second preferred stock of Mohawk Hudson Corporation and 26,650 shares common stock of Buffalo, Niagara and Eastern Power Corporation. The entire organization expenses of Northeastern Power Corporation amounting to $251,854 was charged off during 1928. The output of electric current for the system in 1928 reached a new peak at 636,746,639 kilowatt hours against 435,876,840 kilowatt hours in 1927 representing an increase of 46 per cent. The substantial increase in output of electric current for the system in 1928 is accounted for by the added industrial power load at Oswego and Rome, N. Y., and the long term power contract with the Buffalo, Niagara and Eastern power system which became effective on September 1.

"The outlook for the year 1929 gives promise of a further substantial increase in the output of electric current for the entire system. To provide for the expanding power load it was necessary during the year to increase the generating facilities of the system by adding the municipal plant at Oswego with an installed capacity of 7,500 horsepower and the hydro-electric plants on the Raquette River at Norwod, Norfolk, East Norfolk and Raymondville. The four plants on the Raquette River owned by the Power Corporation of New York had previously been developed hydro-mechanically. Construction work has begun on a new hydro-electric plant at Moshier on the Beaver River which it is expected will be placed in operation not later than June, 1929. The construction of additional generating plants is planned to start early in 1929."

Officers of the company for the ensuing year were re-elected as follows: Floyd L. Carlisle, president; J. N. Carlisle, vice president; R. B. Maltby, vice president; C. E. Norris, vice president; R. K. Ferguson, secretary; F. A. Rogers, treasurer; H. S. Sutton, assistant secretary; W. H. Versfelt, assistant treasurer and W. C. Hull, Jr., assistant secretary.—Kennedy.

A. P. W. Co. Gets First Cargo of Wood Pulp

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., April 8, 1929.—The Albany Perforated Wrapping Paper Company has opened navigation on the Hudson River by bringing this week to the North Albany plant the largest cargo in the history of commercial activities in this district. The steamship *Nord*, under command of Captain Hansen, arrived here during the week with a cargo of 2,246 tons of wood pulp from Sheet Harbor, Nova Scotia. Approximately 175 longshoremen employed by the A. P. W. Company and the members of the *Nord's* crew are now engaged in unloading the consignment. The *Nord*, however, is equipped with modern hoisting and swinging tackle and it is expected that the entire cargo will be unloaded in four days.

In the long voyage from Sheet Harbor the *Nord* was held up two days making the entire distance in about one week. The first delay was encountered off New York harbor when the steamer was held for a day in quarantine. Another delay was experienced at Castleton when the ship grounded on a sand bar where it was forced to remain until high tide. Captain Hansen declared that the normal draft of the steamer was about fifteen feet. The *Nord* traveled over the newly cut sections of the Deeper Hudson which it is believed when completed will allow even greater cargoes to enter the Port of Albany. The big steamer left her home port at Tonsberg, Norway, more than a year ago and since that time has been in a dozen different ports picking up cargoes of various natures. Where she will go from Albany has not yet been determined, according to Captain Hansen, who said that he would await orders from the owner before returning to New York City for another cargo.

The wood pulp which arrived at the terminal is the first of sixteen similar cargoes planned for this season by the A. P. W. Company when it is expected that all previous records will be smashed. State officials are utilizing every means at their command to increase tonnage through the state waterways and have advised mid-west shippers of the economies of water transportation from the Great Lakes to the sea.

Inspect Champion Coated Paper Plant

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, April 16, 1929.—A tour of inspection of the Champion Coated Paper Company's plant in Hamilton was made last week by 60 members of the Retail Merchants' Association of that city. Dinner was enjoyed in the spotlessly clean cafeteria conducted by the concern.

This was the first of a series of trips to leading industrial plants and in choosing the coated paper plant as the initial one, it was stated the Hamilton business men recognized the establishment as the largest of its kind in the United States, and in the world.

From the cafeteria the guests were conducted through the handsome office structure, thence to the mills, with the party divided into groups led by Ray Steffen, James Simpson, Barrey Hall, Walter Holzberger, William Creager and Homer Ferguson.

The visiting merchants visited every department from 7 P. M. until 10 P. M. and in that time they were enlightened in the manufacture of coated paper, witnessing in actual operation all departments from the place where the wood pulp is received from the Champion Coated Paper Company's own 38,000 acres of forests in South Carolina; past the great mixers, the enormous paper machines that transform water, pulp and clay into sheets of paper; through the sorting rooms, packing departments, coating mills, and thence back to the place of starting.

Sale of Colorado Paper Mill Postponed

[FROM OUR REGULAR CORRESPONDENT]

DENVER, COLO., April 15, 1929.—The seventh attempt to sell the Colorado Pulp and Paper Company was to have been attempted on April 5, but receiver George W. Beck, postponed the date until May 7, stating that interested parties requested this. There have been many rumors afloat that there are persons interested and will pay the price named by the court, about $300,000 when there is any certainty that the contention between Charles B. Myers and Joseph Buchhlater the largest owners is settled.

The state Supreme court recently ruled in favor of Mr. Buchhlater and if Mr. Myers and Mr. Buchhlater can agree to some sort of a settlement now, it is expected the May 7 sale will be an effective one.

The Filter that has the self cleaning discharge. Operation starts with wire 100% open and continues that way assuring no drop off in capacity.

The Filter with lowest maintenance cost and guaranteed wire life of at least two years.

The Filter that affords positive inspection of the discharged stock and is the tell tale of poor performance in previous operations.

Visit Our Exhibit At The Chemical Show

FILTRATION ENGINEERS INCORPORATED
SERVICE FE ECONOMY

858 Summer Ave., Newark, N. J.

FILTER DECKERS SAVE ALLS PULP WASHERS

New York Trade Jottings

At the annual meeting of the stockholders of the Union Bag and Paper Company the directors were all re-elected.

* * *

C. S. Hedley, of Price Bros. & Co., Ltd., of Quebec, Canada, was a New York visitor early this week.

* * *

The Chemical Foundation has leased the twelfth floor of the new Manhattan Life Building, located at 60th street and Madison Avenue, and will move its offices there on or about May 1.

* * *

Four new trucks have recently been added to the delivery service of the Beekman Paper and Card Company, Inc., of 137 Varick street, New York.

* * *

S. Spector & Son, paper mill supply dealers, have moved their office and warehouse from 422 East 102nd street to 177 South street, New York. Their new telephone number is Beekman 0847.

* * *

R. J. Thomas, mill superintendent of the St. Anne's Board Mill Company, Ltd., Bristol, England, arrived in New York last Sunday and will inspect mills in this country and Canada.

* * *

J. D. Zellerbach, president of the National Paper Products Company, is at present in New York furthering the interests of his organization.

* * *

H. P. Gould, president and treasurer of the Gould Paper Company, of Lyons Falls, New York, was a prominent New York visitor last week.

* * *

The Domestic Mills Paper Company, of 555 West 27th street, New York, has been appointed distributors of the Niagara Paper Mills, of Lockport, N. Y., on their line of Niagara Covers. The sales on this line are under the direction of John J. McHugh.

* * *

Parsons & Whittemore, Inc., paper and wood pulp agents and exporters, are moving from 299 Broadway to larger quarters at 10 East 40th street, New York, on April 22. Their new telephone number will be Ashland 0321.

* * *

Among the tenants now installed in the new Chanin Building, located at the corner of 42nd street and Lexington avenue, New York, are the Kimberly-Clark Company, the Manufacturers Paper Company, the Pan American Pulp and Paper Company, and the Spruce Falls Paper Company.

* * *

George Hoff, of the Sani-Paper Products Company, Philadelphia, will demonstrate the New-Use Paper Pie Plate at the next weekly luncheon and meeting of the New York Division of the Salesmen's Association of the Paper Industry, which will be held at the Canadian Club, New York, Monday, April 22.

* * *

Ernest Kellogg, eldest son of R. S. Kellogg, secretary of the News Print Service Bureau, and his family, have moved to Chicago, where he has been appointed assistant secretary of the National Association of Milk Dealers. He will promote a campaign to increase the use of milk and cream.

* * *

Gosta Diedrichs, Torsen Hernod, Ragnar Lagergren and Birger Sundfelt, Swedish pulp mill representatives, sailed from New York yesterday, Wednesday, aboard the Cunard liner *Aquitania* for Europe, after spending two months in this country, during which they investigated new developments in the paper industry on the Pacific Coast.

* * *

The Du Pont Cellophane Company, of 2 Park Avenue, New York, announces the appointment of E. C. Lake as assistant director of sales of the organization. Mr. Lake, in his five years association with the company, has been in several territories and has served as special representative and eastern district sales manager. J. C. Jorgensen has been appointed eastern district sales manager succeeding Mr. Lake. For the past five years Mr. Jorgensen has been in several different territories developing the use of cellophane, and up until his recent appointment served as assistant district sales manager.

A. W. Luhrs Addresses Paper Salesmen

There was an unusually large attendance at the regular weekly luncheon and meeting of the New York Division of the Salesmen's Association of the Paper Industry, held last Monday at the Canadian Club, New York, to hear A. W. Luhrs, of the Paperboard Industries Association, discuss the sales promotion efforts of his organization, of which he has charge.

Mr. Luhrs described the methods adopted in approaching other trade associations, State and Government departments, etc., and gaining their co-operation in substituting corrugated and solid fiber containers for wooden or tin containers. He explained in a comprehensive manner how the tests were made proving the superiority of the paper board products from every standpoint, giving numerous examples.

Of special interest to the salesmen was the account of how the advantages of carton packing had been demonstrated to paper merchants in the larger cities, with the result that many merchants are now ordering their paper shipped to them in cartons. A large majority of the paper mills in this country are now using paper board cartons, some manufacturers using as many as 120,000 heavy, high-test boxes per year.

Motion pictures were effectively used to illustrate Mr. Luhrs' address. One film showed a series of crushing tests proving the stacking strength of corrugated paper boxes as compared to wooden bushel baskets. The corrugated box withstood a pressure of no less than 1,000 lbs., without visible damage.

Another effective film showed the remarkable railroad car shunting tests conducted by the Bureau of Explosives which proved, without the shadow of a doubt, the superiority of paper board boxes over standard wooden boxes for packing stick dynamite.

Rogers Paper Stock Plan Is Ratified

The Rogers Paper Manufacturing Company announces that its stockholders have ratified the plan of the company to change its participating class "A" stock to a convertible basis. The class "A" stock will now be convertible on a share for share basis into class "B" stock and is entitled to cumulative preferential dividends at the rate of $3.60 per annum.

For the year 1928, net earnings available for dividends, after all charges including depreciation and federal taxes, were equivalent to over $12.60 per class "A" share or over 3½ times the preferential dividend requirement. These same earnings were equivalent to over $6.16 per share on the combined class "A" and "B" stocks outstanding, or better than 11 per cent on the present selling price of the class "A" stock around $55 per share.

Bids for Paper for Currency

[FROM OUR REGULAR CORRESPONDENT]

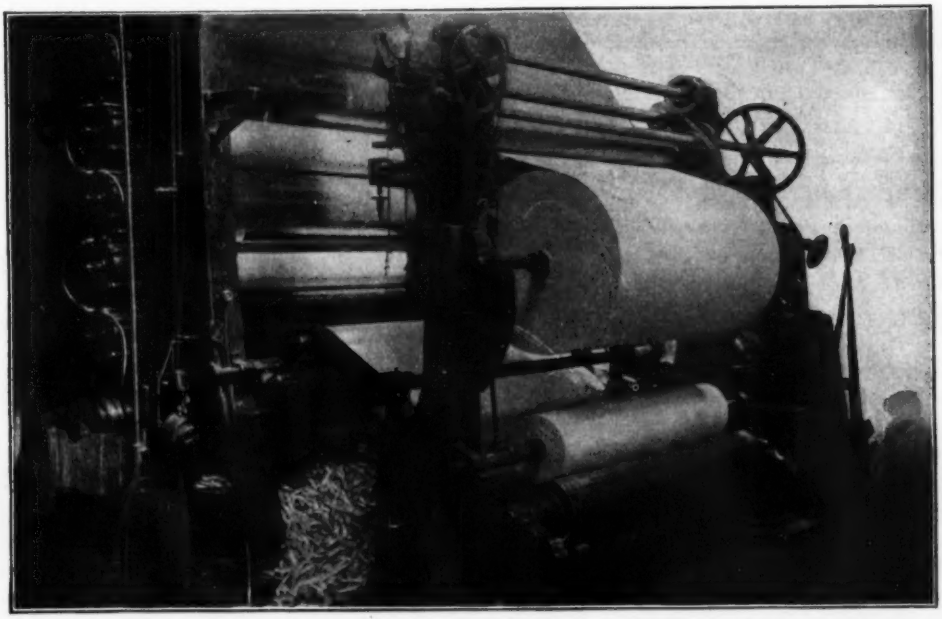
WASHINGTON, D. C., April 17, 1929.—The Secretary of the Treasury has received the following bids for approximately 2,500,000 pounds of distinctive paper for currency for the fiscal year beginning July 1; Crane & Co. (all) at 47.5 cents per pound (part) at 49 cents and 51.5 cents; American Writing Paper Co., (part) at 53 cents and 52.5 cents; Collins Manufacturing Co., (part) at 47 cents. Awards have not yet been announced.

During the present fiscal year ending June 30, 1929, the award went to Crane & Co. at 47.5 cents per pound.

"M & W" Drum Winders for Super-Calenders

PERMITS FASTER SPEED FOR CALENDERING

Shipping Rolls are made direct from Supers without rewinding the Rolls



Two-Drum Type Winder (Photograph taken in one of the mills of the Kimberly-Clark Co.)

Built with Two or Four-Drums
Makes use of wide stacks desirable

Rolls trimmed direct from Super-Calenders —(retrimming unnecessary).

Rolls readily changed from winding drums to unwinding shaft by means of self-contained electric motor lift.

Straight, hard rolls are made without wrinkles . . . no soft rolls or telescoped ends.

Winders equipped with automatic tension regulation to eliminate paper breaking between calender and winder . . . and to regulate the hardness of rolls to be wound.

For wide stacks of Calenders, the "M & W" Four-Drum Super-Calender Winder reduces the waste of finished product to a minimum.

All features of the well-known "M & W" Four-Drum Winder used for making shipping rolls direct on paper machine are retained—such as independent winding of rolls on independent shafts, etc.

"M & W" Four-Drum Super-Calender Winders equipped with Removable Top and Bottom Slitters. "M & W" Brass Collapsible Winding Shafts are the latest improvement for High Grade Mills.

Further Particulars Upon Request

THE MOORE & WHITE CO.
PHILADELPHIA, PA.
N. PHILA. STA. PENNA. R.R.
PAPER MILL MACHINERY

Patents Pending for Recent Improvements to "M & W" Drum Winders

PAPER TRADE JOURNAL
ESTABLISHED 1872

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SUPERINTENDENTS AT WAUSAU

The convention committee of the American Pulp and Paper Mill Superintendents Association, under the direction of R. H. Kelly, has prepared a program of unusual interest to every pulp and paper mill man in the United States and Canada for the tenth annual convention of the association to be held at the Hotel Wausau, Wausau, Wis., June 6-8. It is to be hoped that every member of the association will avail himself of the opportunity of attending the convention and carry back to his mill much information and knowledge gained from the contact with men in the mills throughout the country, and also that they will come to the convention prepared to share their own knowledge and experiences with others.

One of the most interesting papers that has been secured for the Book and Fine Paper Divisional meeting of which James G. Ramsey, of the Jessup & Moore Paper Company is chairman, will be on the subject of "Opacity of Paper," by Harry Williamson of the Champion Fibre Company, Canton, N. C.

Mr. Williamson needs no introduction to paper mill superintendents or others connected with the industry as he has spoken to the members on previous occasions and his services are in constant demand by hundreds of men in the mills.

A new angle on the subject of "Rubber Rolls and Deckle Straps" will be discussed by R. B. Adams of the Stowe & Woodward Company, and will no doubt prove very interesting as well as instructive.

Another interesting feature of this meeting will be the opening of a question box for round table discussion on subjects of vital interest to book and fine paper superintendents. There are some twenty questions in this box, sent in by men prominent in the association and in the industry, and everyone will be on a subject of interest to all.

The tentative program of the Chemical and Mechanical Pulp Divisional meeting, of which V. E. Fishburn of the C. F. Burgess Laboratories, Inc., is chairman, gives promise of many attractive features being provided.

Under the Sulphite Pulp section there will be a paper on "Preparation of Chips" by G. L. M. Hellstrom of Montreal, Que.

Among other interesting papers will be one on "Mill Control Work," which deals with the practical application of scientific principles in operation, inclusive of definitely establishing a sliding scale for the chlorine number in direct ratio to the bleachability of pulp. Other features on the subjects of Chip Packing in Digesters; Positive Liquor Circulation; Hot Acid Penetration and its direct and indirect advantages, will be freely discussed.

On Mechanical Pulp there will be papers presented by Joseph H. Slater, William Brydges and Levi A. Fralick on subjects of much interest and value to the groundwood superintendents. These subjects will be announced in the PAPER TRADE JOURNAL.

On Sulphate Pulp there will be papers on subjects of vital interest to all sulphate superintendents as well as kraft paper mill superintendents. George Voght of Mosinee, Wis. will have charge of this section.

Members are urged to go to the convention by railroad where it is possible, as the railroads have granted the reduced fare privilege of one half fare for the return trip via the same route as used in the going journey, providing the association receives 150 certificates at the convention. It is hoped that everyone will remember this feature and make it possible, as the number of certificates needed has been reduced from 250 to 150.

The Hotel Reservation committee urges all members to send in their request for hotel service as soon as possible. In order properly to take care of the members, reservation should be mailed at once to R. H. Kelly, chairman, care Hotel Wausau, Wausau, Wis.

CONVERTED PAPER PRODUCTS

The Department of Commerce announces that, according to data collected at the biennial census of manufactures taken in 1928, the value of converted paper products manufactured in 1927 amounted to $742,789,398, of which total $611,884,689 represented the value of these products made in the converted paper products industries, and $130,904,709 the value of such commodities made as secondary products in other industries. In addition, $15,408,050 was reported as the value of miscellaneous products.

The principal converted paper products made in 1927 were as follows: Boxes and containers, paper and paper board, $326,990,004; paper bags, $69,612,287; envelopes, $54,437,286; coated book paper, $40,725,170; wall paper, $29,984,612; waxed paper, $27,577,399; toilet paper, $20,746,866; papeteries, $16,093,472; cards cut and designed, $15,440,220; paper patterns, $13,693,290; glazed and fancy paper, $11,367,144.

The numbers of establishments reporting for 1927 in the several converted paper products industries were as follows: "Bags, paper, exclusive of those made in paper mills," 88 establishments; "Boxes, paper and other, not elsewhere classified," 1,219 establishments; 'Card cutting and designing," 60 establishments; "Cardboard, not made in paper mills," 9 establishments; "Envelopes," 153 establishments; "Paper goods, not elsewhere classified," 341 establishments; "Paper patterns," 17 establishments; "Wall paper," 53 establishments; making a total of 1,940 establishments for the group. Of the total, 499 establishments were located in New York, 207 in Pennsylvania, 201 in Massachusetts, 179 in Illinois, 120 in Ohio, 113 in New Jersey, 73 in Missouri, 66 in California, 53 in Wisconsin, 50 in Connecticut, 41 in Maryland, 41 in Michigan, 38 in Indiana, 29 in Minnesota, 24 in Rhode Island, 22 in Virginia, and the remaining 184 in 25 other States.

Paper Production In February Increases

The total paper production in February, according to identical mill reports to the American Paper and Pulp Association, was 542,076 tons as compared with 598,591 tons in January and 523,018 tons in December, 1928. The February, 1929 production total was 542,076 tons as against 529,789 tons in February, 1928, an increase of 2.3 per cent. All grades excepting hanging, wrapping, news print and book, registered increases in monthly production over last year. Paperboard production showed an increase of 9 per cent over February, 1928, while felts and building increased 16 per cent, tissue 1 per cent, writing 3 per cent and bag 23 per cent. The following grades registered production decreases in February, 1929, as against February, 1928; hanging 27 per cent, wrapping 5 per cent, news print 8 per cent and book 0.6 per cent.

Shipments, as compared with February, 1928, showed an increase in all grades, except hanging papers, with the most substantial increases recorded in paperboard, bag, writing and tissue. Total stocks on hand at the end of February decreased about 3 per cent as compared with the previous month but showed a 6 per cent increase over stocks on hand at the end of February, 1928; news print, paper board, hanging, and felts and building showed substantial increases over February, 1928 while bag, tissue, and writing papers showed a decrease in stocks as compared with a year ago.

Identical pulp mill reports for February showed that the total production of all grades of pulp was about 1.5 per cent less than February, 1928. Mill consumption was 2 per cent less and shipments to the outside market 5 per cent greater than during the corresponding month last year. February, 1929 production totaled 202,320 tons against 231,031 tons in January and 206,149 tons in December, 1928.

Total stocks on hand at the identical mills reporting, registered a decrease of almost 14 per cent as compared with the last year. All the individual grades, excepting soda pulp, showed decreases in inventory as compared with the same time last year.

REPORT OF PAPER OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF FEBRUARY, 1929

Grade	Production tons	Shipments tons	Stocks on hand end of month tons
News print	103,644	108,375	35,642
Book	90,388	93,508	48,590
Paper board	202,957	201.550	54,332
Wrapping	49,637	49,212	53,071
Bag	15,670	15,371	7,998
Writing	30,231	31,099	39,879
Tissue	11,752	12,306	8,664
Hanging	4,319	4,129	2,793
Felts and building	5,994	6,945	2,219
Other Grades	27,484	27,961	17,719
Total—All grades	542,076	550,456	270,907

REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF FEBRUARY, 1929

Grade	Production tons	Used during month tons	Shipped during month tons	Stocks on hand end of month tons
Ground wood	32,562	79,754	1,977	86,575
Sulphite news grade	34,935	32,611	2,854	8,159
Sulphite bleached	24,230	21,867	2,484	2,481
Sulphite easy bleaching	3,318	2,951	305	729
Sulphite Mitscherlich	6,263	5,424	1,066	1,096
Sulphate pulp	28,488	23,965	5,157	4,166
Soda pulp	22,475	15,896	7,640	4,613
Pulp—Other grades	49	.....	48	9
Total—All grades	202,320	182,468	21,531	107,828

To Plan Forest Research on New Wood Uses

New and continuing lines of Government research on the uses of wood will be determined at a conference to be held at the Forest Products Laboratory, Madison, Wis., April 15 to May 1, it was announced by E. H. Clapp, in charge of the Branch of Research, Forest Service, United States Department of Agriculture. The conference will decide upon the program to be followed during the coming fiscal year by the laboratory and a number of the forest experiment stations.

"This conference will deal with a situation that brings unusual opportunities and responsibilities to Forest Service research men in the development of scientific forestry and wood utilization," Doctor Clapp explains. "Efforts of forestry leaders throughout the country to establish a sound economic basis for the perpetuation of our timber supply by coordinating the interests of the lumber producer and the owner of timberland are meeting with increased recognition and success. This is evidenced by Congressional support of forest research extended this year through the operation of the McSweeney Act, and by the cooperation of lumbermen, landowners, wood users, and foresters with the Forest Service. The conference will outline a program for next year's laboratory and field investigations that will help to establish new and more efficient uses of our timber stand, to bring little-used species of wood into wider use, and to determine practical relations between the growth of the tree and the quality of its material when converted into wood products."

Among the research projects to be considered at the conference, Dr. Clapp mentioned: The study of wood waste in logging and milling; improvements in the use of wood in building construction; moisture proofing, fire proofing, and decay-preventing treatments of wood; survey of the damage to wooden shipping containers, leading to improvements in design and construction; possibilities of using soda-lime base for making sulphite pulp, with the purpose of increasing the number of pulping species, improving processes, increasing the yield, decreasing losses, and reducing stream pollution; improving the growth and protection of the most important types of forests in the United tates.

International Buys Boston Herald Stock

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., April 15, 1929—The Purchase of 50 per cent of the stock of the Boston Publishing Company, owners of the *Boston Herald* and the *Boston Traveler,* several months ago by the International Paper Company of New York became known here last week on the filing of the required statement of ownership at the Boston Post Office. The International Paper Company of New York is a subsidiary of the International Paper and Power Company, which owns the New England Power Company and other large interests in the United States and Canada.

The statement which was filed showed an addition to the list of stockholders published last October. This recorded as the Publishers' Investment Corporation of Delaware, the beneficial interest in whose stock is owned by the International Securities Company, a Massachusetts association affiliated with the International Securities Company, a Massachusetts association affiliated with the International Paper Company of New York.

The International Paper Company, has joined with the other stockholders and has pooled its interest in the *Herald* and *Traveler* under three trustees, who will, therefore, represent all interests —John R. Macomber, president of Harris, Forbers & Co.; Philip Stockton, president of the Old Colony Trust Company, and Sidney W. Winslow, Jr., a director of the First National Bank, president of the United Shoe Machinery Corporation and president or director of several other large corporations, including the Boston Publishing Company.

In an editorial discussing the sale of the stock, the *Boston Herald* of April 12 said:

"It had been felt that a close contact between a great producer and a great consumer of white paper would work out to the advantage of both companies, the readers of each newspaper, and the community. That is the significance of the transaction. A plain, open, above board arrangement, long contemplated, has been finally effected and made known in a plain, open, above board manner.

"Any inference that the purchase of stock in the Boston Publishing Company means a change in the policy of the *Herald* or the *Traveler* is altogether false. The internal affairs of each paper will remain the same. The aim will remain the same—to produce first-class publications day by day."

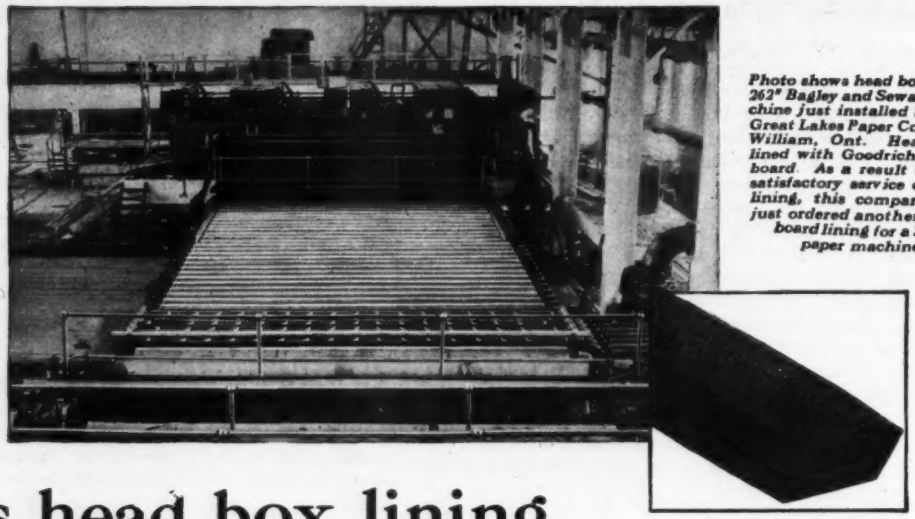


Photo shows head box on a 262" Bagley and Sewall machine just installed by the Great Lakes Paper Co., Fort William, Ont. Head box lined with Goodrich Aeroboard. As a result of the satisfactory service of this lining, this company has just ordered another Aeroboard lining for a 304" paper machine

This head box lining protects quality of paper

New Goodrich development, Aeroboard, insures uniformity of product . . . . .

AEROBOARD, the remarkable new "rubber lumber" developed by Goodrich, makes a smooth, easily cleaned head box lining.

Aeroboard is superior to African mahogany, cypress or other wood lining because Aeroboard does not accumulate slime and dirt. "Slugs" and imperfections in the sheet are substantially reduced. Head boxes lined with Aeroboard can be quickly hosed out while the felts are being washed.

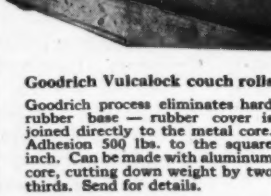
Any good millwright can apply Aeroboard in your own plant by following our easy instructions. The box can be made absolutely waterproof.

We will gladly send a sample of Aeroboard and further information on its use in the paper industry. We will quote prices on Aeroboard upon receipt of head box drawings showing dimension details. Write to The B. F. Goodrich Rubber Co., Akron, O., or use the coupon below.

Goodrich Vulcalock couch rolls

Goodrich process eliminates hard rubber base — rubber cover is joined directly to the metal core. Adhesion 500 lbs. to the square inch. Can be made with aluminum core, cutting down weight by two thirds. Send for details.

Goodrich Highflex transmission belting



Engineers call it "the greatest advance in belt construction in 30 years." Bootlegging eliminated. Longer service life. Send for details.

Check List of Goodrich Products used in the Paper Industry

Vulcalock couch, worm, and press rolls

Highflex belting;

Rubber lined pipe and fittings;

Fire, water, air and steam hose;

Cutless rubber bearings, rubber lined tanks, screen diaphragms, gaskets, packing.

Flexite buckets and dippers.

THE B. F. GOODRICH RUBBER CO. PTJ-5
Akron, Ohio

Gentlemen: Please send without obligation to me, a sample section of Aeroboard and data on its application to head box lining.

Name.....

Firm.....

Address.....

Goodrich

Section of the
Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

Measurement of Wood Receipts at the Mill*

By Chester W. Alden[1]

About six weeks ago I was notified to prepare a paper for the Annual Meeting of this Section on "Measurement of Wood Receipts at the Mill," which I am sure you will all agree covers a multitude of complicating problems. Practically all this time has been occupied in assembling such data as is available and I must confess it is rather meager, and feel convinced that many months of constant study should be allowed any one man to properly report on so important a subject.

The Wood Measurement Committee of our parent association, after five years of study, brought in their final report at the last annual meeting and the following is their conclusion:

"We conclude that if a volumetric measurement of a quantity of wood be made, it is practicable to compute its weight of bone-dry substance, if such information be desired. Similarly, if at the mill, weight be used as being the most advantageous method of measurement, then its equivalent 'green' volume can be determined."

R. W. Sterns of the Abitibi Power and Paper Company, Limited, who was a member of the above-mentioned committee has probably given this subject more study than any one man in this country, and we are all greatly indebted to him for the following:

A measurement of the wood received each day at the pulp mill is usually desired, as a check against woods scales, and in conjunction with measurement of wood used, as a basis for determining the amount of wood put into storage.

The methods followed at different mills in making this measurement vary widely, ranging all the way from a detailed scale of each log as sawed, to an estimate based on the number of random-filled block cars received.

Mills which receive their wood in log lengths of eight, twelve or sixteen feet, very often make a careful count and scale of these logs as they pass up a broad-side-on jack ladder to the slasher. The procedure is usually to measure the diameter of each log (as inside the bark) at one end only, the solid volume being calculated on the assumption that the log is a cylinder of the measured diameter. This should be reasonably accurate, assuming that the logs come up the ladder with butts and tops towards the scaler in equal numbers. A scale at both ends would be a further refinement which would eliminate errors due to unequal grouping of butts and tops, but the cost would of course be doubled and for this reason the double scale is rarely used. The length of the logs is usually not measured by the scaler, but is assumed to be standard. The practice of cutting logs a few inches overlength introduced a systematic error in this measurement, which of course can be allowed for by taking the log length to be the actual average instead of the standard length. This type of scale yields results in cubic feet solid wood—a very reasonable unit for the measurement of pulpwood—but in most cases conversion is made to cords on the basis of a constant number of solid cubic feet to the cord.

A similar scale in which the contents of the logs is estimated in feet-board-measure in accordance with a saw-timber log rule, and then converted to cords, on the basis of a constant number of feet board measure to the cord, is also sometimes used. This application of a system of measurement originated for saw-timber where slabs are of no value, to an industry which makes use of the entire log, is of course obviously illogical and inaccurate. It survives because of Government sanction and a conversion factor favorable to the operator.

Wood purchased from settlers and independent pulpwood operators usually comes in four-foot lengths. Stacked on railway cars or on road vehicles in orderly piles, such wood is conveniently arranged for cordage measure and is usually scaled into the mill on this basis. The cord, still the commonly accepted basis of measurement in the pulp and paper industry, is an indefinite unit requiring, for completeness, further specification as to the condition of the wood—whether barked or unbarked—and as to the volume of the stack, whether a cord of 128 cu. ft., or of 144 cu. ft., or 150 cu. ft., or any other special standard as used in various parts of the country. The cubic foot solid wood, or convenient multiple thereof, is much to be preferred as being accurate, self-explanatory, and in terms of a definite commonly-accepted unit.

The method of measuring short log lengths by cording them up in an orderly pile is, of course, probably too well established and too convenient a practice to discard. The solid content of such a stack is known to vary with the size of the logs and with various other factors, but there seems to be no reason why the variations cannot be determined and tabulated, so as to facilitate the evaluation of any stack in terms of solid cubic feet. Under this system the scaler, given a stack of cord wood to measure, would not be content with merely determining the volume of the pile, but would appraise its solid content, based on his experience and guided by test data made available for his information. This would provide a reasonable basis for allowances for closeness of piling, presence

* Paper presented at the Joint meeting of the Woodlands and Technical Sections of the Canadian Pulp & Paper Association, Montreal, January 24, 1929.

[1] Nashwaak Pulp & Paper Co., Limited, St. John, N. B.

or absence of bark, size of wood, etc., and would do away with any necessity for over-length cutting, over-piling of the stack or other allowances for "shrinkage" in order that the purchaser may be satisfied that he is getting a full "cord." Disagreements as to the solid content to be allowed, could be settled to the satisfaction of both parties by scaling the logs in a typical stack.

Water-borne, four-foot wood (and longer lengths also) is sometimes checked into the mill on the basis of a piece count, assuming an average size. Since the volume of a log is proportional to the square of its diameter, a slight departure from the assumed average log size may be expected to cause a considerable error in an estimate of this kind. Such estimates are usually based on an average diameter determined by the Woods Department by averaging last year's scale sizes. Assuming that in this way the present year's average size can be accurately approximated, the block count method will give inaccurate results for shorter periods, as the log size varies from the average from time to time, and over the whole period would tend to give too low a result, because of the fact that the volume is proportional to the square rather than the first power of the diameter. As an example of this consider nine logs, each four feet long, of diameters respectively 4, 5, 6, 7, 8, 9, 10, 11, 12 inches. The average diameter is 8 inches and nine logs of 8 inches average diameter, 4 ft. long, would have a calculated volume of $\frac{\pi \times 8 \times 8 \times 4 \times 9}{4 \times 44} = 12.6$ cu. ft. Actually, however, if the volumes of the nine logs are worked out and summated, it would be found that the correct total volume is 13.9 cu. ft. In practice the log count is usually worked out on the basis of an average number of pieces per cord, but the same error is involved in this calculation, the number of pieces per cord having other than a straight line relationship to the log diameter. The block count method is thus very liable to error.

At one mill known to the writer, wood is measured into the mill by counting the number of random-filled open-topped block cars received. In this instance the wood is brought to the mill, quite a distance from the slasher, by rail. The cars are filled by running them under the discharge of a conveyor, which takes the blocks away from the slasher, without any attempt being made to stack the blocks as for cordage measure. The cars are rated at a definite number of cords each, on the basis of calibration tests, and the total wood receipts are computed on the basis of the counted numbers of cars received times the conversion constant. It seems probable that difficulty would be experienced in obtaining close checks in calibration tests on these cars, and that this method would not be an accurate one.

In many mills the wood receipts are computed on the basis of the weighed production. This method was discussed in some detail in an article by the writer published in the Pulp & Paper Magazine of April 23, 1925. This paper was later used as a basis for a discussion on Wood Measurement at the Summer Meeting of the Technical Section, June 25, 1925. Obviously, all wood fiber brought into the mill must leave it again in some form or another. The greater part of it goes out again as production (in pulp or paper) which is very carefully weighed and tested for moisture as basis for sale. If, in addition, careful check is kept on the incidental losses—pulp wastes, sawdust losses, culls, etc., it should be possible to determine accurately what weight of wood fiber has been dealt with daily. Then, the density of pulpwood tending to be a constant for any one operation (as shown by the Committee on Wood Measurements, Technical Section, Canadian Pulp & Paper Association—see report of Wood Measurement Committee, Technical Section Transactions, 1928), it should be possible to convert this weight into volume of wood, if desired. A source of error in using this system is the determination of the amount of wood substance dissolved in the process, and lost as fluid effluent from the mill. The amount of this loss in the groundwood process is small and can probably be estimated closely enough. In the sulphite process, of course, over 50 per cent of the wood used is dissolved. Most mills using this method estimate the wood to the sulphite mill on the basis of the number of digesterfuls of chips cooked, or by weighing the chips in transit on automatic weighing conveyors, or by measuring the wood in some way prior to chipping.

If all the wood received is used in the mill without storage, or if the wood sent to storage can be scaled separately, the above method can be employed to advantage for measuring the wood receipts of the mill.

In some cases, the Woods scale, which has usually to be made in any case, as basis for purchase, payment of jobbers, or payment of stumpage dues, can be made to serve also as a measurement of the wood going to the mill. Thus in one mill supplied from a rail operation the skidways along the railway are carefully scaled and numbered, and in this way, by noting the numbers of the skidways loaded each day, the quantity of wood taken to the mill can be determined.

Weighing as a method of wood measurement at first sight seems very attractive, but when it is remembered that the weight so obtained is the combined weight of the dry wood fiber, together with an approximately equivalent amount of water, it is apparent that this measurement is meaningless unless supplemented by an accurate determination of the relative proportions of wood and water. An accurate sampling of the wood received, and a fairly elaborate system of physical testing is thus an essential adjunct to measurement by weight.

Weighing of sulphite chips in transit on conveyors by automatic weighing machines is at present practiced by some mills with good results. The wood at this stage of the process is in a form such that it can be readily and accurately sampled.

Rail shipments of pulpwood can be conveniently weighed on track scales, and such a measurement should be accurate, provided a satisfactory system of moisture tests can be arranged.

Weighing of pulpwood blocks in transit on conveyors, in the same way as chips, is a further possibility which, as far as the writer is aware, has not been developed to any extent to date. Accurate moisture tests would, of course, be essential in this case also.

Recent work by the Committee on Wood Measurement of the Technical Section, Canadian Pulp & Paper Association indicates that dry weights and volume measurements of pulpwood bear a definite relationship one to the other and that from a measurement in terms of weight, the solid volume equivalent can be easily calculated, or vice versa. This Committee has proposed the use of either solid volume or weight units to replace the cord and foot-board-measure for pulpwood measurements, recommending solid volume units, however, as being more generally applicable to woods as well as mill measurements, and specifically advocating the adoption of the cubic foot of solid wood as the standard of measurement for the industry.

The continuous automatic volumetric measurement of wood by water displacement or by calipering is a possibility which merits investigation and development. As far as the writer is aware it has not been applied with any considerable degree of success to date.

From the above you will readily appreciate the difficult problem which confronts the industry to compute accurately the quantities of pulpwood used in the mill and of relating woods measurements, on which the cost of the pulpwood is based, to exactly equal units as consumed in the mill.

One mill reports that the following method comprises the determination of volume used for groundwood and of weight used for sulphite:

"To get at our volume, a lot of tests were made, and are still made from time to time, by piling up actual cords in racks. Our grinders are "magazine" grinders, taking four-foot wood, and these carefully measured cords are put in the magazines and a careful check is made in this way, so that the automatic counter on the magazines can be relation to a cord of wood passing down through the magazine. In this way we have determined that our

particular counters represent .987 cords for each revolution they make.

Every stick of wood used by us, to date, has arrived in cars and has been scaled at the mill on arrival. These cords are the units with which the Woods Department is credited. Consequently, we think that, by re-piling certain quantities of wood and using these quantities in the magazines, and relating them to the automatic counter, we should get very good results, so far as groundwood is concerned.

Passing to the Sulphite Department, we take about ten samples daily for density tests (determination of moisture content) and a cumulative average is compiled from all these tests. Chips then are weighed automatically on a belt weightometer. We think that this also should give us pretty accurate figures, after making an allowance for sawdust loss in chipping. This allowance is made on a percentage basis. We have a check against all these results when, as at the present time, we are running the mill entirely on wood direct from cars and none at all from the pile. These cars are, of course, scaled. Over a period of one week, two weeks or longer, actual production of paper is taken from an accurately measured number of cords going in to the mill. The longer the period, the safer these figures should be, as stock inventory at the beginning and end of the period has less effect as it is spread out over greater tonnage.

We think that these methods are in line with the latest modern ideas, but, as a matter of fact, it is still prudent to charge a little more to mill than the various calculations indicate. We all know how deplorably one can get out in wood calculations. Therefore, it is better to build up a small reserve all the time, for safety.

Professor H. O. Keay, of Canada Power and Paper Corporation, reports their practice of measuring wood at the mill as follows:

Rail Wood

The cars of rail wood are measured by cullers during the unloading process and the number of cords and fractions thereof, in each car, is in this manner determined. Samples of wood from two or three cars are set aside daily and run through the chippers separately. Samples of the chips, from each car, are tested for moisture and the average moisture content of wood, in that particular car, is taken to be the same as the test of the chips. The gross weight of each car is taken on the rail wood scales by weighing the car before and after unloading. From the gross weight and the moisture test, the air-dry weight of the wood received is calculated, and the weight and cordage of the wood charged to the mill.

River Wood

The weight per cord of river wood is determined by cording up four-foot blocks of river wood, weighing them on scales, finding the moisture test by chipping the blocks in the same manner as described for the rail wood and figuring the air-dry weight from the wet weight and moisture test calculated as above.

Method of Charging Off Wood to the Mill

Sulphite

The wet weight of the chips delivered to the sulphite mill is found by a Merrick Weightometer, located on the chip belt. Samples of the chips are taken every hour and tested for moisture and their average test used in finding the air-dry weight of wood delivered to the sulphite mill. The number of cords charged off is found by dividing the total air-dry weight of the chips by the air-dry weight per cord, determined from the average air-dry weight of either river wood or rail wood received, or a combination of the two.

The sulphite production is considered to be the air-dry weight of the chips, multiplied by a yield figure, fixed by cooking experiments conducted by our Research Department.

Groundwood

The cordage of wood used in our groundwood mill is measured by recording discs, eight feet in circumference, with a saw-tooth edge, which are pressed against the wood, as it descends through the grinder magazines. The cordage measured in this way is multiplied by the average weight per cord of wood, found as described in the preceding paragraph on sulphite, and the result is considered the groundwood production.

W. G. Wright of Price Brothers sets forth their method as follows:

Our experience is limited almost entirely to experimental work involving measuring wood by volume on the jackladder as it enters the mill. We have also made some experiments on water immersion of a certain number of pieces in order to arrive at a factor for converting scaled measurement to actual volume of the pieces.

The method adopted in measuring volume of wood on the jackladder consists in the following processes:

1. Count of all pieces in three or four different classes, that is, logs, broken pieces, 6-foot pieces and 4-foot bolts.

2. We measure a certain number of the pieces entering the mill; we arrange the selection of these pieces so that we secure about 10,000 measurements in each of the two main classes (4-foot bolts, and logs) throughout the season.

3. Measurements of diameter are made on large end, small end and middle, and length is measured.

4. From the small end diameter and length we calculate board feet, and from the middle diameter or from the average of the small and large end diameters and length, calculate cubic content.

5. It should be noted that the average figures secured from these measurements are averages of over-all measurements, including any cull logs, cull in accepted logs, or overrun. To relate these averages for the different classes of log to corresponding averages derived from woods scale, certain woods measurements are necessary.

6. The total quantity of wood entering the mill is based on averages of measurements on the jackladder so obtained applied to the total counts of wood entering the mill as recorded.

7. Total quantities so obtained can be used as a basis for checking quantities cut and driven.

8. It should be noted that the measurements of cubic volume so obtained assume that there is no loss by brooming; actually there is a certain loss from this cause and, as noted above, experiments by water immersion have been made to determine what this loss may be.

At the Nashwaak Pulp and Paper Company, river wood (logs of approximately 16 feet in length) with bark on and 4-ft. hand peeled wood are used. In the former, rafts are made up, containing from 500 M. to 1,000 M. Each raft is marked and properly recorded, which designates the number of brails in each raft, separately marked and dated and the number of logs, total contents, and average contents per log in feet, according to the New Brunswick rule.

When rafts or parts of a raft are used it requires only an accurate count at the wood room to determine the number of feet used for a day, week or longer period. During the past several seasons we have been fortunate in having logs containing about 95 per cent spruce and 5 per cent fir, of fairly uniform size, age and rate of growth, averaging about 9 inches at top end, which has enabled the mill to use a factor for conversion to finished product that has shown but slight variation.

Logs are counted over the jackladder and contents for mill usage determined by applying the same average contents given as when scaled into each raft.

Our 4-foot peeled and largely purchased wood is a different problem. It is delivered by rail and water approximately ¾ and ¼ respectively. During the regular shipping season for rail wood approximately half is unloaded direct to the mill and the balance taken to storage. Without track scales in our yard it is not practicable to determine the actual weight of wood by weighing cars before and after discharging contents, although I will admit such an installation might involve an expense that would be fully justified, not only for mill usage, along with moisture tests, but also

as a check against railway charges, as many cars are received in the winter months containing snow, ice and frozen debris on which we are undoubtedly paying freight to considerable extent.

Purchased wood contains a higher percentage of balsam than logs from our own operations and of varying diameters, ages and density.

Operations are inspected periodically during the process of making to determine percentage of balsam, character of growth, rot, etc., and amount produced, to cover advances usually necessary. All shippers are specifically instructed to clean all wood of particles of bark, trim knots close and refrain from loading excessively knotty wood or wood showing any signs of decay. When received, it is measured on a cord basis of 128 cu. ft. of well-made, well-stacked sound wood. Deductions are made for extra voids caused by long knots, improper piling and culls. A charge is made for any wood containing bark. About 20 per cent of the wood is counted on cars and vessels to establish the average number of sticks to a cord. When taken into the mill, a count is taken of all wood going to the chippers and boiler house and used by computing from the pulp production with a conversion factor. Periodically, a cord of wood from both logs and 4-foot wood is racked, and weighed, and the moisture determined by the disk method. This is done to determine the class of wood being used and as a check against production.

The foregoing sets forth the methods of measuring wood at the mills in general use today so far as I have been able to learn from data collected. If any unit is using commercially, automatic weighing, calipering and displacement methods, other than cited, I have no knowledge of it.

Before closing it would seem in order to touch once more on field measurements, as many handling wood in 4-foot lengths consider the cord the logical and a sufficiently reliable measure to use, although size of wood, straightness and clean knotting affect the solid contents by as much as 20 to 25 per cent. To get good wood, well-made and stacked, with a certain amount of accurate observation and rules to go by, with reliable or first class scalers, the cubic contents can be fairly accurately determined and, as Austin Cary states, it seems to be about the best we can expect in the field.

Shrinkage is another point he touched upon, stating it is quite heavy in the tangential direction, far less radially, and negligible in the lengthwise direction.

Round wood in the pile, undisturbed, cracks and splits in drying and shrinks less than 1 per cent during a season, but sometimes 2 to 3 per cent in case of repiling. It is, therefore, considered good practice to make due allowance in cases where peeled wood is corded up and paid for on banks or sidings, which requires repiling for a further measurement on delivery to mill or storage. This might account for part of the difference sometimes existing between woods deliveries and mill usage, particularly if it was wood cut for, or operated by, a company which could not, without large expense, rescale it after unpiling, such as river-driven wood taken direct to storage piles, or wood dumped into and discharged from open-top cars to storage without scaling. Perhaps the shrinkage in rough wood would be even greater.

Mills not operating a system of close control to determine daily the quality of wood, amount of culls, sawdust, screenings, white-water losses, etc., are quite apt to be forced to change the factor of conversion to the expense of the wood pile.

As I understand it, manufacturing costs may be roughly computed on an average about as follows:

Sulphite—2 times the cost of wood

Groundwood—1.1 times the cost of wood

Newsprint—2.5 to 3 times the cost of wood

It is, therefore, evident that wood contributes heavily to the cost of these products.

As the industry spends large sums for research and recording apparatus to improve quality and efficiency in the use of coal, sulphur, lime and minor raw materials, and likewise employs efficient accounting organizations to check up costs and point out losses in relation to their manufacture, it would seem logical to expect that it should appropriate funds for the development of what can be considered a more practical method of measuring wood (by volume or weight) adaptable to both the field and mill. The wood measurement committee report that wood volume can be converted into equivalent wood weight by use of a constant factor.

The adoption of the "cubic foot" unit for measurement of pulpwood in 4-foot lengths and over, to be of commercial use, would, in my opinion, require a change in all Government regulations covering the sale and scale of stumpage to avoid complicity and duplicity in accounting and the education of operators, and producers of wood accustomed to prices governed by the cord and thousand foot basis.

As it appears to me, the problem still confronting the industry as a whole is *to develop a universally workable measurement.*

Permanence of Paper Investigated

As a part of the research on permanence of paper, three samples of ledger were tested at the Bureau of Standards, Washington, D. C. This paper was made as a permanent paper and was tested from that standpoint. The paper was aged by heating in the oven for 72 hours at 100 deg. C. and tested chemically and physically before and after aging. The chemical tests showed that the paper changed considerably in certain ways, especially as to alpha-cellulose content, copper number and color. Inasmuch as the paper had a very high rosin content for a permanent paper that may have been the cause, another possibility is that some change occurred in the beater which did not show up until the paper was heated. The physical tests showed that the paper was very strong and retained nearly all of its strength after aging. Taking into regard the chemical and physical tests, it may be said that the paper looks very good from a durability standpoint but it not entirely satisfactory from a permanence standpoint.

Mullen Bursting Strength Tester

The work on the Mullen tester was continued at the Bureau of Standards, Washington, D. C., data being obtained on the effect of the size of the aperture and on the age of the rubber diaphragm. The bureau did not have a used diaphragm more than about three months old. This diaphragm was still in fairly good shape. No effect could be found because of the age of this diaphragm in comparison with a fresh one. A report was prepared for the manufacturers of this tester, giving our recommendations concerning the nature of the clamping surfaces, the size of the apertures, and the clamping pressure. All metal clamps with sand blasted surfaces and having an aperture of 1.200 inch was recommended. It was also recommended that the clamping pressure be increased.

Tentative Standard Methods Available

The Cellulose Committee of TAPPI wishes to announce that reprints of tentative standard methods for (1) the determination of alpha cellulose, and (2) determining the viscosity of cellulose in cuprammonium hydroxide, recently published by the Division of Cellulose Chemistry, American Chemical Society, are now available to members of the Technical Association. Copies may be obtained upon application to the secretary of the Division, Dr. C. J. Staud, Eastman Kodak Company, Rochester, N. Y.

Gray's Harbor Co. Constructs Water Line

PORTLAND, Ore., April 5, 1929.—The Grays Harbor Pulp and Paper Company is starting construction of an auxiliary water supply line at Hoquiam, Wash., on the Wishkah River. This pipe line will be used as an auxiliary to the company's present project on the East Hoquiam River during the dry season. It is expected to have the new line completed and ready for operation by June in advance of the dry season.

Paper Research Literature, VII

A List of the Contributions by the Members of the U. S. Bureau of Standards, Department of Commerce, 1928

By Clarence J. West[1] and B. W. Scribner[2]

A list of the publications of the members of the Paper Section, U. S. Bureau of Standards, covering the period up to December 31, 1924, was published in Paper Trade J. 80, no. 21:46-52 (May 21, 1925); the first supplement, covering the publications for 1925, appeared in Paper Trade J. 82, no. 20:49 (May 20, 1926); the second supplement, covering the publications for 1926, appeared in Paper Trade J. 84, no. 23:45 (June 9, 1927); the third supplement, covering the publications for 1927, appeared in Paper Trade J. 86, no. 17:51-52 (Apr. 26, 1928).

Carson, F. T., and Snyder, L. W. Increasing the capacity of the Elmendorf tearing tester. Paper Trade J. 86, no. 13:57-60 (Mar. 29, 1928).

In order to make the Elmendorf tearing tester suitable for testing heavy fibrous materials such as roofing felts an auxiliary weight was designed so that it could be quickly attached to the tester and used without any other alteration in the instrument, the same scale being used either with or without the augmenting attachment. To do this it was necessary to derive an adequate calibration formula for the tester and then to set up an analogous one for the heavy-duty tester. The calibration procedure is given in some detail and a simple procedure for periodic adjustment is outlined. Some improvements are also suggested.

Eckhardt, H. C., and Snyder, L. W. A study of the Thwing impact tester. Paper Trade J. 86, no. 15:64-66 (Apr. 12, 1928); Tech. Assoc. Papers 11, no. 1:91-93 (June, 1923).

This paper presents the results of a study of the Thwing impact tester to determine its suitability for testing heavy paper and paper boards. This device appears to be capable of giving consistent results when used for testing paper boards, but the range of the instrument is not well suited to the testing of ordinary papers. A comparison is made with the hydraulic type of bursting strength tester and a fair degree of agreement with this type of tester is found. A method of calibrating the instrument is outlined.

Lofton, R. E., and Snyder, L. W. Results with testers for measuring tensile strength of paper. Paper Trade J. 86, no. 24: 63-66 (June 14, 1928).

This paper gives the results of tensile strength tests as obtained with six commercial testers of various types. A description of each instrument and the method used in calibrating it are given.

Seven different samples of paper, ranging in tensile strength from about six to thirty pounds, were used in this investigation. Tests were made under standard atmospheric conditions—65 per cent relative humidity and 70 degrees Fahrenheit temperature. A total of 1680 test specimens was used.

Most of the testers gave fairly uniform results, although there are a few cases of abnormally large variations.

Scribner, B. W. Paper research of the United States Bureau of Standards during 1927. Paper Trade J. 86, no. 4:52-56 (Jan. 26, 1928).

A comprehensive view is given of the bureau's paper research activities for the year. Various researches on the technical standardization of paper and on paper-making materials and processes are described. The purpose of each investigation, the method of procedure, and the results obtained are stated in brief detail.

Scribner, B. W. Paper standardizing activities of the Bureau of Standards. United States Daily, 3: Nos. 10-11 (Mar. 15, 16, 1928); Paper Trade J. 86, no. 15:57-58 (Apr. 12, 1928).

This article is an exposition of the paper activities of the Bureau of Standards. The general functions of the paper section are cited and a detailed description is given of the nature of the paper activities in testing, testing research, development of specifications, and studies of paper-making materials and processes. Typical examples of the various paper researches are included.

West, C. J., and Scribner, B. W. Paper Research Literature, VII. Revised. Third supplement. Paper Trade J. 86, no. 17: 51-52 (Apr. 26, 1926).

A list of contributions by members of the U. S. Bureau of Standards, Department of Commerce, during 1927. A brief abstract of each publication is included.

[1] Chairman, Committee on Abstracts and Bibliography.
[2] Chief, Paper Section, Bureau of Standards.

Cellulose Chemistry Division Program

The program for the spring meeting of the Division of Cellulose Chemistry of the American Chemical Society at Columbus, Ohio, April 30 to May 3, 1929, includes the following papers:

Peanut Hull Cellulose, by D. F. J. Lynch and M. J. Goss.

Wood Cellulose for Nitration, by F. Olsen and H. Aaronson.

Support for Fundamental Research on Cellulose, by C. H. Herty.

Some Problems of the Textile Chemists, by C. A. Amick.

Cellulose Trisulfonic Acid Ester, by E. Gebauer-Fulnegg.

Control of Viscosity of Solutions of Cellulose, by F. Olsen and H. Aaronson.

Sorption of Water Vapor by Cellulose and Its Derivatives, by S. E. Sheppard and P. T. Newsome.

On the Decomposition of Cellulose by Treatment with Alkali at High Temperature, by E. Heuser.

Effect of Fine Division on the Solubility of Cellulose, by D. F. J. Lynch.

The Fractional Precipitation of Cellulose Acetate and Some Properties of the Fractions, by J. G. McNally and A. P. Godbout.

A Preliminary Study of the Chemical Composition of Wood in Relation to Physical properties, by H. E. Dadswell and L. F. Hawley.

Optical Rotation of Cellulose Materials. I. The Optical Rotation of Soluble Cellulose in Alkali, by T. F. Murray, Jr., C. J. Staud and H. LeB. Gray.

Report of Pentosan Committee, by W. H. Dore.

Standard Cellulose Discussion, by H. LeB. Gray.

Members of the Technical Association are cordially invited to attend the Columbus meeting of the American Chemical Society. Attendance at these meetings is open to all registered individuals, whether members of the society or not. A nominal registration fee is charged. The complete programs of the various divisions of the society will be printed in the April 20 issue of the News Edition of *Industrial and Engineering Chemistry*.

Schopper Folding Tester

The minimum tension of each of the bureau folding testers was measured at the Bureau of Standards, Washington, D. C., and found to be surprisingly uniform for all the testers. This measurement was thought of some importance because the specimens frequently, and perhaps usually, break near the neutral position of the folding blade. A report is being prepared for publication covering the method used by the bureau in measuring the friction of the rollers, and giving a procedure for the inspection and adjustment of the folding tester according to the bureau's present practice. This is a supplementary report to Technologic Paper No. 357.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts and Bibliography of the Technical Association of the Pulp and Paper Industry

Clarence J. West, Chairman

Power

Modernizing the Mill and Power Plant: Variable Speed Transmission Applications of the Mechanical Type. Reginald Trautschold. Paper Trade J. 86, No. 20, 44-50 (May 17, 1928). A discussion of variable speed transmissions of the mechanical type by means of pictorial presentation and brief but pertinent references to specific installations of merit, to show how the transmissions are applied, for what services they are suitable and what they have accomplished in the way of effecting reductions in the cost of the mills' output.—A. P.-C.

Automatic Starters for Synchronous Motors. K. B. Spear. Pulp Paper Mag. Can. 26, 825-826 (June 14, 1928). A brief illustrated description.—A. P.-C.

Getting Better Lighting at Less Cost. J. J. Berliner. Pulp Paper Mag. Can. 25, 553-556 (Apr. 26, 1928). A discussion of the advantages and fundamentals of proper lighting.—A. P.-C.

Plans and Policies that cut Truck Overhead. E. A. Saunder. Paper Ind. 10, 71-73 (Apr., 1928). A discussion of the factors to be considered in reducing trucking and delivery costs in the paper industry.—A. P.-C.

Moving Materials at Minimum Cost in Paper and Pulp Mills. Society of Electrical Development. Paper Trade J. 86, No. 13, 53-56 (March 29, 1928). A discussion of the merits of electric industrial trucks, giving examples from practice of their performance and advantages.—A. P.-C.

Importance of Lubrication. Thomas Dial. Paper Mill 51, no. 14, 4-8 (Apr. 7, 1928). A discussion of the importance of lubrication in paper mills.—A. P.-C.

Modernizing the Mill and Power Plant: Flowmeter Installations. Reginald Trautschold. Paper Trade J. 86, No. 18, 42-50 (May 3, 1928). A discussion of the necessity of feed water meters, and particularly of steam flowmeters, for efficient and economical generation and utilization of steam, exemplified by a number of typical examples taken from actual paper mill boiler house operations.—A. P.-C.

Modernizing the Mill and Power Plant: Temperature Recorders in Paper Mill Service. Reginald Trautschold. Paper Mill 86, no. 22, 36-40 (May 31, 1928). Temperature recorders can profitably be applied to beaters, digesters, groundwood tanks, desuperheated steam lines, boiler feed water, hot wells, bleaching tanks, driers, sulphite liquor, outdoor temperature, digester blowouts, bleaching powder storage rooms, regulator boxes, wire pits, drier condensate, sulphur burner gases, etc. The advantages to be derived therefrom are discussed.—A. P.-C.

Electrical Metering Instruments in the Pulp and Papermaking Industry. O. C. Cordes. Paper Trade J. 86, No. 24, 38-44 (June 14, 1928). A discussion of the advantages and importance of equipping all electric motors in pulp and paper mills with indicating or recording ammeters in order to detect or prevent overloading.—A. P.-C.

Atmos Boiler Supplies Paper Mill. J. H. D. Blancke. Paper Ind. 10, 253-257 (May, 1928). A description of the Atmos boiler generating steam at a pressure of 1470 pounds per square inch in the 30 ton pulp mill of Fors Bruck Co., Fors, Sweden.—A. P.-C.

Modernizing the Mill and Power Plant: Stoker applications. Reginald Trautschold. Paper Trade J. 86, No. 16, 46-52 (Apr. 19, 1928). A discussion of the advisability of the installation of automatic stokers in medium and small paper mills.—A. P.-C.

Modernizing the Mill and Power Plant: Water and Steam Purification. Reginald Trautschold. Paper Trade J. 86, No. 14, 42-46 (Apr. 5, 1928). A discussion of the reduction of power costs by means of a complete system of water and steam purification, touching briefly on the various factors involved.—A. P.-C.

Ruths Steam Accumulator. R. A. Langworthy. Paper Trade J. 86, No. 20, 55-60 (May 17, 1928). A description of the principle, construction and operation of the Ruths steam accumulator, with a discussion of its merits and its economic importance to the pulp and paper industry.—A. P.-C.

New Power and Process Hookup at Tennessee Paper Co. L. H. Morrison. Paper Trade J. 86, No. 19, 67-68 (May 10, 1928). By an improved arrangement of non-condensing and condensing engine, the use of live steam to the paper drying rolls has been eliminated and the use of purchased power has been discontinued without any greater coal consumption than when the major part of the mill was operated with purchased energy. The layout is described.—A. P.-C.

Drying Wood Refuse for Fuel. E. V. Ahara and R. C. Wiren. Pulp Paper Mag. Can. 26, 377-379 (March 22, 1928). A description of the Nordstrom drying tower installed at the Wisconsin Rapids mill of the Consolidated Water Power & Paper Co., and of its performance, which was found to agree with the constructor's guarantee within 5 per cent. One of its outstanding features and merits is that it works at very nearly 100 per cent efficiency with gases at as low temperature as 193 degrees F.—A. P.-C.

Ball Bearings in Paper Mills. A. Lambrette. Papeterie 49, 1026-1030 (Nov. 25, 1927). A discussion of the advantages and disadvantages of the use of ball bearings and of the relative importance of equipping the various parts of the paper machine with them.—A. P.-C.

Physics of Steam. J. O. Twinnerbrow. Pulp Paper Mag. Can., International No., 151-155 (Feb., 1928). An explanation of the properties of steam and of the very plain natural laws to which its properties are subject.—A. P.-C.

Use of Steam Power in the Pulp and Paper Industry. A. D. Harrison. Pulp Paper Mag. Can., International No., 169-189 (Feb., 1928). An article dealing particularly with the conditions met with in Canada, and indicating how and to what extent steam engines and turbines can be economically used to extract the available heat units from the steam between the boiler pressure and the pressure at which the steam is required in the mill; i.e., it deals principally with the use of non-condensing engines and turbines.—A. P.-C.

Steam Boiler. F. A. Combe. Pulp Paper Mag. Can., International No., 157-163 (Feb., 1928). A discussion of modern developments in boiler design.—A. P.-C.

Burning of Coal. T. S. Morrisey. Pulp Paper Mag. Can., International No., 223-230 (Feb., 1928). A description of mechanical stokers and of pulverized fuel apparatus, and of furnaces for application of both systems.—A. P.-C.

Electric Steam Generators in Pulp and Paper Mills. J. F. Montabone. Pulp Paper Mag. Can., International No., 231-235 (Feb., 1928). A discussion of the merits of electric steam generators with a description of the types constructed in Canada (Canadian General Electric, Kaelin, Allis-Chalmers).—A. P.-C.

Steam Plant Accessories. J. P. McRae. Pulp Paper Mag. Can., International No., 253-256 (Feb., 1928). A discussion of the merits of economizers, air preheaters, steam accumulators

and Nordstrom drying towers.—A. P.-C.

Modernized Mills and Power Plants: Some Steam Turbine Applications. Reginald Trautschold. Paper Trade J. 86, No. 12, 38-46 (March 22, 1928). A discussion dealing with steam turbine application in the pulp and paper industry.—A. P.-C.

Use of Low-Pressure Steam in Paper Manufacture. W. B. Lewis. Paper Trade J. 86, No. 9, 62-64 (March 1, 1928); Paper Mill 51, No. 8, 114-120, 136 (Feb. 25, 1928); Pulp Paper Mag. Can. 26, 247-249 (Feb. 23, 1928). In a discussion showing that there are really very few plants enjoying a high degree of efficiency as regards steam utilization, the author emphasizes the following points: (1) Temporarily forget the mechanical power requirements and the boiler plant and study the uses of heat. (2) Every operation requiring heat should be done with low pressure steam wherever possible. (3) Reduce the amount of low pressure steam to a minimum through the study of machines and processes. (4) Adopt a type of prime mover that will give the greatest amount of mechanical power per pound of steam ejected. (5) Spend money first on improving apparatus and piping systems utilizing lower-pressure steam before worrying about the boiler plant, except for some reason other than efficiency of the latter.—A. P.-C.

Modernize the Mill and Power Plant: Anti-Friction Bearings. Reginald Trautschold. Paper Trade J. 86, No. 10, 38-46 (March 8, 1928). Concrete evidence is presented of the savings effected by equipping jordans with anti-friction bearings, and the advantages of anti-friction bearing applications to motors, fans, pumps and other power plant and industrial apparatus commonly included in the mechanical equipment of pulp and paper mills, are discussed. —A. P.-C.

Short Center Drives Pay Well: Belt, Chain and Rope. Reginald Trautschold. Paper Trade J. 86, No. 8, 295-307 (Feb. 23, 1928). The chief advantages of short center drives as compared with long center drives are lower cost, higher efficiency, reduction in power consumption and reduction in upkeep expenses. Brief remarks are made and numerous illustrations given to show how the various types of short center drives are today effecting substantial economies in pulp and paper mill operations.—A. P.-C.

Power Requirements for Pumping Paper Stock. R. K. Annis. Paper Ind. 9, 2054-2054c (March, 1928); Paper Trade J. 86, No. 8, 183-189 (Feb. 23, 1928); Paper Mill 51, No. 8, 49-52, 156, 158, 168 (Feb. 25, 1928). The Wood pump, as developed for handling sewage, is described together with its performance as compared with that of the older design of two-blade open-impeller pump and also recent improvement in the design of the impeller to make it more suitable for handling paper stock. Some of the numerous uses to which this pump is being put in pulp and paper mills are outlined. The determination of the power requirements for pumping paper stock under given conditions is discussed, showing the absence of reliable data concerning the effects of many of the factors involved (nature of the stock, nature and surface of piping, elbows, etc., consistency of the stock for values above 4 per cent) and the necessity of securing such data. Tests run by the Thilmany Pulp & Paper Co. at Kaukauna, Wis., on an 8 inch Fairbanks-Morse Wood paper stock pump showed that the maximum horsepower as shown by a water test in the hydraulic laboratory will not be exceeded when the pump is handling stock, irrespective of how high the consistency may be; i.e., if the motor is large enough to drive the pump against any head, high or low, when handling water, it will be large enough to drive the same pump when handling any kind of stock against any head, but the capacity decreases as the consistency increases. The most practical way to plan a paper stock pumping installation is considered to be to compare the conditions with an installation that is already in operation.—A. P.-C.

Saving $28,000 Annually in Paper Mill Coal Cost. J. G. Berger. Power 67, 456-458 (1928). Test runs and various plant improvements are described.—C. J. W.

Savealls

White Paper Problems. H. M. Server. Paper Mill 51, No. 22, 20, 69, 72 (June 2, 1928); Pulp Paper Mag. Can. 26, 855-856 (June 21, 1928). A discussion of the savings effected by the recovery of papermaking stock from white water.—A. P.-C.

Vacuum Filters on Pulp and Paper. H. A. Morrison. Paper Mill 51, No. 18, 10, 12, 41-42 (May 5, 1928). A description of the Oliver vacuum drum filter with a discussion of its use and performance as a saveall.—A. P.-C.

White Paper Treatment. James Strachan. World's Paper Tr. Rev. 89, 704, 770, 772 (March 2, 1928); Paper Maker & Brit. Paper Tr. J. 75, 339B (Apr. 2, 1928). A discussion of the requirements of a proper white water treating system, the two aims of which are recovery of stock and prevention of pollution by the paper mill effluent. The author shows that a closed white water system is entirely feasible and practical and discusses its advantages.—A. P.-C.

Sizing

Importance of Hydrogen Ion Concentration in the Sizing of Paper. H. Roschier. Pulp Paper Mag. Can. 26, 639-640 (May 10), 679-682 (May 17), 715-717 (May 24), 745-748 (May 31, 1928). After reviewing critically the various theories of sizing and the work done by different investigators, bringing out the striking contradictions between them, the author describes in detail the work which he carried out on the problem and draws the following conclusions which show the reasons for the apparent contradictions in the various sizing theories and show where each one fits in: (1) When the acidity of the stock is high (corresponding to a pH value of 3.7 to 3.9), as is usually the case in commercial practice, the combined rosin in the size forms but a small quantity of aluminum resinate, which is immediately held by the fibers. The latter also adsorb some of the aluminum ions, which, in conjunction with the aluminum resinate, imparts a positive charge to the fibers, thereby enabling the negatively charged free rosin, which is present in large quantities, to be held by the fibers. In this case a large proportion of the alum is carried away in the backwater. (2) With a low acidity (corresponding to a pH value of 4.5 to 5.0) the sodium resinate is converted mainly into aluminum resinate, which is immediately fixed by the fibers. The excess alum is hydrolyzed to aluminum hydroxide, which is an electropositive colloid, combines directly with the colloidal free rosin, giving an adsorption compound of the same sign. The free rosin is already in the colloidal state in the size milk. This adsorption compound is in turn adsorbed by the negatively charged fibers. Nearly the whole of the excess alum, which at this degree of acidity forms a flocculent hydrate containing very little sulphuric acid, is held by the fibers and carries the rosin along with it. The back water is practically free from alum.—A. P.-C.

Precipitants in Rosin Sizing. E. Oman. Paper Trade J. 86, No. 14, 56-60 (Apr. 5, 1928). The search for salts to replace alum, either wholly or in part, is pushed beyond the use of sodium bisulphate. In the usual procedure used in rosin sizing the fiber first becomes positively charged by adsorption of the alum and the negatively charged rosin is then fixed by the positively charged fiber. The degree to which the fiber surface becomes covered with rosin depends on the degree of dispersion of the latter, the larger the particles the easier the disposition. Different salts give different positive charges to the fiber, and similarly with the rosin the negative charge varied with the particle size. The size of the rosin particles increases with the concentration of the salt. The fixing of the rosin is reversible. Tests carried out with a number of salts and with a constant amount of rosin under conditions such that the whole of the rosin added was retained in the stock showed that the degree of sizing varied with the nature and amount of the salt. Ammonium chloride had a higher sizing action than sodium, potassium, magnesium and calcium chlorides; sodium nitrate had a higher sizing action than potassium, ammonium or calcium nitrates; sulphate of alumina had the greatest sizing action of any of the sulphates used, but sodium and calcium sulphates had considerable sizing action. The use of sodium sulphate might be of considerable interest even though much larger amounts are required than of alum, on account of its cheapness

and also in the case of paper that must be absolutely free from acidity. In order to obtain as complete precipitation of rosin with sulphuric or hydrochloric acid as with alum, the acidity must be from 200 to 500 times as great (pH value corresponding to 0.02 to 0.05 normal, instead of 0.0001 normal), militating against the use of free acid in mill practice.—A. P.-C.

Talk on Sizing. J. R. Petrie. Paper Maker & Brit. Paper Tr. J. 75, 261-263 (March 1, 1928). From a discussion of sizing in the light of 35 years' experience, the author considers that on the whole mill-made size is preferable to purchased size, low-free-rosin size to high-free-rosin size, and that the size and alum should be added in the refiner or in the beater chest rather than in the beater.—A. P.-C.

Latex Sizing by the Beater Method. Joseph Rossman. Paper Trade J. 86, No. 22, 45-46 (May 31, 1928). A review of United States patents, with brief abstracts.—A. P.-C.

Sizing of Fibers. G. M. Clark from Agasote Millboard Co. Eng. pat. 286,-948, July 2, 1927. A more efficient and even distribution of the sizing agent over the surface of the fibers is obtained if tannic acid is added to the beater before precipitation of the size by the addition of alum. Thus, in the manufacture of waterproof pulp boards, the stock may be sized with 11 to 13 per cent of sodium linoleate, to which has been added 10 to 20 per cent of its weight of tannic acid, preferably in the form of a commercial tanning extract.—A. P.-C.

Sizing Paper. J. A. DeCew. U. S. Pat. 1,663,976, March 27, 1928. Rosin size is precipitated with aluminum sulphate which has been made basic after it has been dissolved in water and before it can react with the size.—A. P.-C.

Uses of Glue in the Paper Industry. G. K. Hamill. Glue Research Corp., New York City, 1928, 50 pages. Hamill has presented a summary of the information gathered during the investigation of the uses of glue in the paper industry by the National Association of Glue Manufacturers' Fellowship at the National Bureau of Standards. It includes: Outline of papermaking processes; beater sizing; surface sizing; coating; bibliography. Most of the pertinent information has appeared in the trade press and has been abstracted in these columns.—C. J. W.

Sizing Paper in Continuous Webs. T. Hans assignor to Container Corp. of America. U. S. pat. 1,662,641, March 13, 1928. A sizing solution is sprayed on an advancing web of paper at a point preliminary to its passage to the drying rolls.—A. P.-C.

Dissolving Rosin with Alkali. Papeteries Navarre. Eng. pat. 263,393 (Apr. 10, 1926). Solutions suitable for sizing are prepared by passing once a caustic alkali solution over lump rosin. The caustic alkali solution has a concentration of less than 0.1 per cent. An apparatus is described.—A. P.-C.

Theory of Rosin Size Analysis. A. C. Dreshfield. Paper Trade J. 86, No. 21, 59-63 (May 24, 1928). From a series of tests made on rosin sizes in conjunction with theoretical consideration of the laws of chemistry, especially as applied to the hydrolysis of the salts of weak acids such as abietic acid, the following conclusions have been reached: (1) Because of hydrolysis, free rosin extraction tests on rosin size give misleading information. Results obtained by such tests give not only the true free abietic acid, but also the unsaponifiable matter and some rosin hydrolyzed from the combined rosin. These errors are greater with neutral size than with high free rosin size. (2) The results obtained by free rosin extraction tests vary considerably depending on the exact procedure used. The degree of dilution materially affects the results. (3) Since combined rosin tests are made either on the wash waters from free rosin extractions, or by subtracting such free rosin values from total rosin determinations, any errors in the free rosin determinations will affect the figures reported as combined rosin. (4) Free rosin by titration gives reliable results capable of being checked, and is a measure of the grade of the size. As an indication of what conditions the size enters the reaction in the beaters, it is practically useless. It has possibilities for development into a method for determining ultimate structure of size. (5) Total rosin determinations are unnecessary as sufficiently accurate values can be obtained by calculations based upon the total solids and soda tests. (6) The soda tests can be made accurately. By simple calculations based on these soda tests it is possible to determine accurately the combined and free rosin. It has been shown that variations in the soda content of rosin size, even between neutral and high free rosin size, can have but little bearing on the practical alum requirements in the beater, due to far greater variations in stock and water conditions. (7) The total solids test indicates the relative strength of the paste. It is of primary importance to the user of rosin size. All the information necessary to the practical consumer of rosin size in the paper mill can be obtained from simple calculations based on the total solids and soda tests.—A. P.-C.

Dispersion of Rosin Before Using it for Sizing Paper. Pierre Delcroix. Papier 31, 69-74 (Jan., 1928). The method proposed, which is now in operation in a number of paper mills, consists essentially in treating lump rosin with cold dilute caustic soda solution (about 15 grams per liter). The advantages of the process, which is automatic and continuous, are briefly dwelt upon.—A. P.-C.

Importance of Hydrogen Ion Concentration in the Manufacturing of Paper. H. Roschier. Papers-Och Travaru Tidskrift for Finland, No. 4 (1927); Papier 30, 753-63 (July), 849-61 (Aug.), 955-62 (Sept., 1927). From a critical review of the various theories of sizing and of work done by different investigators, and from the results of experiments which are described in the article, the author reaches the following conclusions. (1) When the acidity of the stock is high (corresponding to a pH value of 3.7 to 3.9), as is usually the case in commercial practice, the combined rosin in the size forms but a small quantity of aluminum resinate, which is immediately held by the fibers. The fibers also adsorb some of the aluminum which, in conjunction with the aluminum resinate, imparts a positive charge to the fibers, thereby enabling the negatively-charged free rosin, which is present in large quantities, to be held by the fibers. In this case, a large proportion of the alum is carried away in the backwater. (2) With low acidity (corresponding to a pH value of 4.5 to 5.0) the sodium resinate is converted mainly into aluminum resinate, which is immediately fixed by the fibers. The excess alum is hydrolyzed to aluminum hydroxide containing very little sulphuric radical. This aluminum hydroxide is adsorbed by the colloidal free rosin, giving an electropositive colloid, which in turn is adsorbed by the negatively charged fibers. Nearly all of the excess alum, which at this acidity forms a flocculent hydroxide containing very little sulphuric acid, is held by the fibers and carries the rosin along with it. The backwater is practically free from alum.—A. P.-C.

Paper Sizing. Fr. Arledter. Papierfabr. 26, 33-36 (1928). are still to be solved, however.—C. J. W.

Typical Action of Wax Sizing in Pulp. Wieger. Wochbl. Papierfabr. 59, 11-18 (1928). The proper use of Montan wax gives a soft, flexible, waterproof material capable of a high finish and with good coloring qualities. Many problems of application are still to be solved, however.—C. J. W.

Sulphite Process

Research on Sulphur Dioxide Solutions. W. B. Campbell. Pulp Paper Mag. Can., International No., 128 (Feb., 1928); Paper Mill 51, No. 6, 22, 24 (Feb. 11, 1928). An explanation of the reasons for the investigation of the properties of sulphur dioxide solutions, now being carried out at McGill University. Though the work is not yet complete, results obtained so far would indicate that the acidic properties of sulphur dioxide solutions rapidly decrease with increasing temperature, and that even below 100 degrees C., such a solution practically ceases to be an acid. This indicates that present day conceptions regarding the mechanism of the disincrusting of wood by the sulphite process may have to be considerably modified before long.—A. P.-C.

Chemical Lime for Pulp and Paper Mills. W. D. Mount. Paper Mill 51, No. 12, 8, 18, 20 (March 24, 1928). A discussion

of the advantages of using high grade lime.—A. P.-C.

Determination of the Caustic Value of Lime. W. M. Shaw, W. H. MacIntire and J. E. Underwood. Ind. Eng. Chem. 20, 312-314 (March, 1928). Two devices for the filtration of calcium sucrate solutions without access of air being described. The use of these devices in the two tentative A.O.A.C. methods for determining the causticity of burnt and hydrated limes was compared with the modified Scaife method. The results indicated no superiority for one method over the others on the score of absolute value when commercial products of high purity were analyzed; but the filtration procedure is superior on the basis of speed, facility and general adaptation to ordinary analytical routine.—A. P.-C.

Effects of Certain Impurities Upon the Determination of Causticity of Limes by Modifications of the Sugar and Scaife Methods. W. M. Shaw and H. W. MacIntire. Ind. Eng. Chem. 20, 315-319 (March, 1928). Results are given of a study of the influence of the usual impurity components of caustic lime on the accuracy of the determination of causticity values by the sugar method (using the filtering device mentioned in the preceding abstract) and the modified Scaife procedure. The chief objectives were (a) to show the adaptation of the filtering apparatus to the analysis of high-magnesic and slow-settling limes; (b) to determine the extent to which the different impurities may be expected to vitiate analytical results; and (c) to compare the two analytical procedures. The factors of magnesia, alone and in silicate combinations, interference of silica, neutral salt concentration of the titration system, and the formation of ternary compounds were considered.—A. P.-C.

Titrometric Determination of Calcium and Magnesium Carbonates in Limestone. J. S. Pierce, W. C. Stetzer and A. M. Peter. Ind. Eng. Chem. 20, 436-437 (Apr., 1928). The method is essentially as follows: the carbonate is dissolved in a measured portion of standard acid, in excess, the carbon dioxide is boiled out, and the excess acid determined by titrating back with standard alkali, bromothymol blue being used as indicator. The difference is the amount of acid required to dissolve the carbonates. Magnesium hydroxide, being much less soluble than calcium hydroxide, is precipitated from the reaction mixture (to which trinitrobenzene has been added) by addition of standard alkali to production of a dark brick-red color. The solution need not be heated, nor is it necessary to add some organic solvent to decrease the solubility of magnesium hydroxide, as is the case when thymolphthalein is used as indicator. The excess alkali used, or that required to make the solution strongly enough alkaline to give the color with the indicator, is determined in each case by comparison with a blank test.—A. P.-C.

Some Fundamental Principles Underlying the Manufacture of Sulphite Pulp. Harold Hibbert. Pulp Paper Mag. Can., International No., 125-127 (Feb., 1928); Paper Mill 51, No. 6, 18, 20, 26 (Feb. 11, 1928). An outline of the work done to date under the direction of the author at the Forest Products Laboratories of Canada and the Department of Cellulose and Industrial Chemistry at McGill University, on problems connected with the fundamental principles of sulphite pulping.—A. P.-C.

Manufacture of Chemical Wood Pulp. E. Peetz, U. S. pat. 1,653,730, Dec. 27, 1927. In digesting wood with reagents such as acid sulphite liquor the digestion pressure is kept at the admissible limit and any excess pressure is reduced by withdrawing portions of the liquid, until the desired temperature is reached; the liberated air is then removed from the top of the digester and the digestion is finished while preventing any further substantial rise in pressure.—A. P.-C.

Calcium Bisulphite Digesting Liquor. G. A. Richter. Can. pat. 270,938 (May 24, 1927). Calcium bisulphite cooking liquor is made by passing a suspension of calcium-bearing material in water in contact with, and counter current flow to, sulphur dioxide, through a confined mass of limestone. A reaction is caused between the calcium-bearing materials, the water and the sulphur dioxide to form calcium bisulphite, which is further acidulated with sulphur dioxide.—A. P.-C.

Steam Consumption in Digesters. Anon. Papier 30, 1291-1296 (Dec., 1927). Examples are given of the method of calculating the steam consumption for cooking in both lagged and unlagged digesters, so as to obtain and compare their thermal efficiencies.—A. P.-C.

Modified Sulphite Process. B. S. Summers. U. S. pat. 1,643,826 (Sept. 27, 1927). Pulp is produced by digestion with bisulphite liquor containing phosphoric acid; the spent liquor is treated with lime, precipitated calcium phosphate is separated, and phosphoric acid is recovered from it, for instance, by reaction with sulphuric acid.—A. P.-C.

United States Patents on Papermaking

Issued During First Quarter, 1929

Clarence J. West, Chairman, Committee on Abstracts and Bibliography

1,699,579. Matrix board. Howard J. Blake, 1,696,917. Suction box cover. Archelaus Lewis, Cumberland Mills, Me. Filed May 20, 1926. (Cl. 92-51). 15 claims.

1,697,032. Method of cooking sulphite pulp. George H. Tomlinson, Montreal, Quebec, Canada. Filed Dec. 7, 1925; renewed May 14, 1928. (Cl. 92-11). 7 claims.

1,697,077. Process of treating fibrous material. James McIntosh, assignor to Diamond State Fibre Company, Bridgeport, Pa. Filed Jan. 30, 1926. (Cl. 154-2). 2 claims.

1,697,464. Apparatus for making prepared roofing William T. Hofmann, assignor to The Flintkote Company, Boston, Mass. Filed Mar. 17, 1922. (Cl. 91-67.9). 5 claims.

1,697,479. Corrugated-board container. Paul A. Schilling and Paul F. Boeye, assignors to Waldorf Paper Products Company, St. Paul, Minn. Filed Apr. 7, 1927. (Cl. 206-65). 4 claims.

1,697,640. Roll mounting. Jerry U. Forbes, Cincinnati, Ohio. Filed Mar. 3, 1927. (Cl. 92-49). 6 claims.

1,697,702. Process for making waterproof straw pulpboard. Edward B. Weston, and William G. Clark, assignor to Terre Haute Paper Company, Terre Haute, Ind. Filed Nov. 4, 1926. (Cl. 92-3). 6 claims.

1,697,709. Reenforced shipping case. Herbert R. Bliss, assignor to Bliss Containers, Inc., Niagara Falls, N. Y. Filed Jan. 10, 1924. (Cl. 223-23). 3 claims.

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1,698,189. Variable-speed paper-machine drive train. Harold F. Dunbar, Turner Falls, Mass. Filed Apr. 13, 1925. (Cl. 60-53). 4 claims.

1,698,298. Shingle material and method of manufacture. Albert L. Clapp, assignor to The Flintkote Company, Boston, Mass. Filed Sept. 12, 1923. (Cl. 92-21). 16 claims.

1,698,351. Process for making wallboard. Oliver W. Storey, assignor to C. F. Burgess Laboratories, Inc., Dover, Del. Filed Apr. 20, 1926, (Cl. 154-2). 9 claims.

1,698,532. Method of making fibrous containers. Lewis C. Brooks, assignor to The National Paper Can Company, Milwaukee, Wis. Filed Aug. 9, 1926. (Cl. 93-36). 2 claims.

1,698,705. Stencil sheet. Shiniiro Horii, Tokyo, Japan. Filed May 18, 1926. (Cl. 41-38.6). 4 claims.

JAN. 15, 1929

1,698,818. Apparatus for moistening paper. William A. Lorenz, assignor to The Otaka Fabric Company, Hartford, Conn. Filed Aug. 9, 1927. (Cl. 92-76). 6 claims.

1,698,886. Method and apparatus for saturating fibrous material. Robert T. Johnston, assignor to The Flintkote Company, Boston, Mass. Filed Mar. 20, 1923. (Cl. 91-46). 29 Claims.

1,699,056. Method and apparatus for digesting fibrous material. Thomas L. Dunbar and August F. Richter, assignors to Chemipulp Process Inc., Watertown, N. Y. Filed Dec. 12, 1927. (Cl. 92-11.) 20 claims.

1,699,118. Wall board. Edward J. O'Brien, assignor to Olaus T. Hodnefield, Montrose, Calif. Filed June 5, 1928. (Cl. 72-116). 9 claims.

1,699,257. Process of and material for treating sewage and industrial waste. John T. Travers,, assignor to The Travers-Lewis Process Corporation, Columbus, Ohio. Filed May 27, 1927. (Cl. 210-23). 10 claims. (Strawboard waste).

1,699,258. Process for treating sulphite pulp waste. John T. Travers, assignor to The Travers-Lewis Process Corporation, Columbus, Ohio. Filed June 21, 1927. (Cl. 210-23). 7 claims.

1,699,259. Paper sheating. George F. Voight, assignor to Economy Products Corporation, a Corporation of California. Filed Nov. 19, 1923. (Cl. 72-118). 8 claims.

1,699,294. Hot joint paste. William Hoskins, assignor to Standard Oil Development Company, A Corporation of Delaware. Filed Dec. 6, 1926. (Cl. 106-8). 4 claims. (Graphite and solids from sulphite liquor).

1,699,349. Method of and means for making photographic paper, film, or the like. William B. Dailey, East Orange, N. J. Filed Feb. 1, 1924. (Cl. 91-69). 18 claims.

1,699,487. Apparatus for forming fibrous sheet material. James J. Hinde, assignor to The Hinde Products Company, Chicago, Ill. Filed June 24, 1927. (Cl. 92-38). 7 claims.

JAN. 22, 1929

1,699,556. Acid-sulphite-pulp process. Robert B. Wolf, New York, N. Y. Filed June 19, 1925 (Cl. 92-11). 5 claims.

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Boston, Mass. Filed Dec. 12, 1925. (Cl. 91-68). 3 claims.

1,699,704. Fiber spool and process. Adrian L. H. Ledeboer, assignor to Charles B. Smith, Pawtucket, R. I. Filed Jan. 4, 1927. (Cl. 92-54). 10 claims.

1,699,760. Method and apparatus for forming paper strips. John C. Sherman, assignor to Brown Company, Berlin, N. H. Filed May 4, 1925. (Cl. 92-39). 21 claims.

1,699,779. Process of improving tensile strength of fabric materials. Paul B. Cochran, assignor to Westinghouse Electric and Manufacturing Company, Pittsburgh, Pa. Filed July 15, 1927. (Cl. 8-20). 14 claims. Consists in exposing the material to ozonized air at an elevated temperature).

1,699,799. Manufacturing paper boxes and the like. Günther Meyer-Jagenberg, Dusseldorf, Germany. Filed Apr. 16, 1927. (Cl. 93-39). 14 claims.

1,699,808. Method of treating waste liquor. Erik Ludwig Rinman. Djursholm, Sweden. Filed Apr. 15, 1926. (Cl. 23-131). 4 claims. (Waste sulphite liquor).

1,699,845. Process of treating waste sulphite liquor. Guy C. Howard, Seattle, Washington. Filed Nov. 22, 1926. (Cl. 92-2). 7 claims.

1,699,978. Folding box. Elmer H. Lupton, assignor to The Bartgis Brothers Co., Baltimore, Md. Filed Aug. 23, 1927. (Cl. 229-23). 1 claim.

JAN. 29, 1929.

1,700,220. Log-barking apparatus. Herbert W. Guettler, Chicago, Ill. Filed Apr. 26, 1926. (Cl. 144-208). 6 claims.

1,700,301. Removable fourdrinier paper machine. Alonzo Aldrich and Earl E. Berry, assignors to Beloit Iron Works, Beloit, Wis. Filed Oct. 1, 1927. (Cl. 92-45). 9 claims.

1,700,312. Drip flange for wood rolls. Carl C. Harris, assignor to Rodney Hunt Machine Co., Orange, Mass. Filed Aug. 14, 1926. (Cl. 92-49). 2 claims.

1,700,390. Barking drum. Johan Daniel Ullgren, Stocksund, Sweden. Filed Apr. 20, 1928. (Cl. 144-208). 8 claims.

1,700,442. Suction roll. William H. Millspaugh, Sandusky, Ohio. Filed July 24, 1925. (Cl. 92-53). 15 claims.

1,700,595. Cellulose composition for esterification and process of preparing same. George A. Richter, assignor to Brown Company, Berlin, N. H. Filed Mar. 3, 1927. (Cl. 260-146). 17 claims.

1,700,596. Composition for conversion into cellulose derivatives and process of preparing same. George A. Richter, assignor to Brown Company, Berlin, N. H. Filed Mar. 3, 1927. (Cl. 260-146). 12 claims.

1,700,647. Method of and apparatus for bleaching paper pulp. Johannes Ruths, assignor to Ruths Accumulator Aktiebolag, Stockhold, Sweden. Filed Oct. 20, 1921. (Cl. 8-2). 4 claims.

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1,700,742. Paper container. Arlington Moore, assignor to Clarke-Moore Corporation, Wilmington, Del. Filed July 31, 1920. Renewed May 19, 1925. (Cl. 229-5.63). 6 claims.

1,700,758. Collapsible box and blank therefor. Aaron Berkowitz, New York, N. Y. Filed Oct. 6, 1925. (Cl. 229-41). 4 claims.

1,700,893. Paper-box machine and the like. Günther Meyer-Jagenberg, Russeldorf, Germany. Filed May 16, 1927. (Cl. 93-55). 7 claims.

1,700,925. Pulp-fiber cleansing apparatus. Mathias Dezurik, Sartell, Minn. Filed Nov. 10, 1924. (Cl. 141-12). 4 claims.

1,701,226. Paper-making machine. Richard Collins, Three Rivers, Ontario, Canada. Filed Dec. 28, 1927. (Cl. 92-38). 6 claims.

Fourdrinier section including an endless wire and a suction roll.

1,701,238. Mold and method of ejecting pulp articles therefrom. Eugene P. Kennedy, San Francisco, Calif. Filed Dec. 14, 1927. (Cl. 92-54). 11 claims.

1,701,291. Plaster board. Morgan K. Armstrong, assignor to United States Gypsum Company. Filed July 12, 1919. (Cl. 72-16). 26 claims.

1,701,454. Wall board. Theodore E. Knowlton, assignor to Certainteed Products Corporation. Filed Sept. 14, 1925. (Cl. 72-23). 3 claims.

FEB. 12, 1929.

1,701,495. Means for indicating and synchronizing the velocities of two elements. Charles G. Clinch, Napoleon Rigabar and Charles R. Gibbs, Carthage, N. Y. Filed June 26, 1926. (Cl. 92-38). 18 claims.

1,701,685. Machine for making elastic paper. William A. Lorenz, assignor to The Otaka Fabric Company, Hartford, Conn. Filed May 28, 1927. (Cl. 92-69). 7 claims.

1,701,918. Process and apparatus for making roofing material. Julius H. Gillis, assignor to Anaconda Sales Company. Filed Aug. 15, 1923. (Cl. 154-2). 9 claims.

1,701,926. Prepared shingle and process for making same. Lester Kirschbraun, assignor to The Flintkote Company, Boston, Mass. Filed Dec. 26, 1922. (Cl. 154-2). 4 claims.

1,702,129. Attachment for paper machines. Eugene O'Brien. Eau Claire, Wis. Filed Aug. 8, 1923. (Cl. 92-40). 7 claims. Apparatus for impregnating paper.

1,702,131. Paper-making machine. Paul Priem, assignor to Americaf Voith Contact Company, Inc., New York, N. Y. Filed Aug. 15, 1921, and again in Oct. 28, 1925. (Cl. 92-44). 3 claims. Fourdrinier machine.

1,702,166. Paper-crinkling machine. William A. Lorenz, assignor to The Otaka Fabric Company, Hartford, Conn. Filed July 2, 1927. (C1. 92-69). 11 claims.

1,702,230. Process and apparatus for reducing pulp. Lloyd T. Murphy, Franklin, Ohio. Filed Mar. 18, 1925. (C1 92-24). 8 claims.

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1,702,268. Mechanism for coloring and etching paper webs and the like and method thereof. Hermann Palm, Neukochen, near Unterkochen, Germany. Filed Aug. 17, 1925. (C1. 101-212). 11 claims.

1,702,347. Pulp-wood digester. Rex W. Hovey, St. John, New Brunswick, Canada. Filed Jan. 21, 1928. (C1 92-7). 5 claims. A sleeve keyed to the lining of the digester.

1,702,401. Envelope. Carl Julius Erickson, Los Angeles, Calif. Filed Nov. 26, 1927. (C1. 229-86). 2 claims.

1,702,435. Drip flange for wood rolls. Carl C. Harris, assignor to Rodney Hunt Machine Co., Orange, Mass. Filed Aug. 14, 1926. (C1. 92-49). 2 claims.

1,702,587. Production of composite cooking liquor. Linn Bradley and Edward P. McKeefe, assignors to Bradley-McKeefe Corporation, New York, N. Y. Filed Nov. 5, 1921. Renewed claims.

1,702,588. Production of alkali-metal carbonates. Linn Bradley and Edward P. McKeefe, assignors to Bradley-McKeefe Corporation, New York, N. Y. Filed Nov. 5, 1921. Renewed May 5, 1927. (C1. 23-48). 16 claims. Process of evaporation and calcining.

1,702,589. Production of caustic alkali and other products. Linn Bradley and Edward P. McKeefe, assignors to Bradley-McKeefe Corporation, New York, N. Y. Filed Nov. 5, 1921. Renewed May 5, 1927. (C1. 23-48). 14 claims. Process of recovery of black liquors.

1,702,633. Beater roll. Frank G. Feeley, assignor to E. D. Jones and Sons Co., Pittsfield, Mass. Filed Jan. 26, 1928. (C1. 92-22). 15 claims.

1,702,733. Envelope machine. James M. Gauntlett, Seattle, Wash. Filed Aug. 6, 1926. (C1. 93-1). 12 claims.

1,702,907. Paper drying machine. William A. Lorenz, assignor to The Otaka Fabric Company, Hartford, Conn. Filed Aug. 9, 1927. (C1. 34-48). 1 claim.

1,702,965. Plastic composition and method o making the same. Joseph F. Haggerty, assigne to National Gypsum Company, Buffalo, N. Filed Oct. 27, 1925. (C1. 106-34). 7 claims.

1,702,966. Wall board. Joseph F. Haggerty assignor to National Gypsum Company, Buffalo N. Y. Filed July 13, 1925. (C1. 106-34). 12 claims.

1,703,010. Suction box. George James Manson, Hawkesbury, Ontario, Canada. Filed Dec. 8, 1927. (C1. 92-51). 1 claim.

FEBRUARY 26, 1929.

1,703,134. Adhesive material and process of making. Lawrence Bradshaw and Henry V. Dunbar, Bainbridge, N. Y. Filed Dec. 17, 1926. (C1. 87-17). 9 claims. Starch, casein and protein-rich meal.

1,703,137. Safety envelope. John Hilmer Elfverson, assignor to Axel Valdemar Holm, Stockholm, Sweden. Filed Aug. 27, 1927. (C1. 229-80). 3 claims.

1,703,141. Deckling machine. Joseph N. Fountain, assignor to Old Colony Envelope Company, Westfield, Mass. Filed Feb. 29, 1928. (C1. 92-68). 5 claims.

1,703,183. Plaster board. Clarence W. Utzman, assignor to United States Gypsum Company. Filed Aug. 12, 1922. Renewed Mar. 4, 1927. 1 claim.

1,703,414. Process of making resin-impregnated sheets. Gordon E. Wightman, assignor to Bakelite Corporation, New York, N. Y. Filed June 22, 1926. (C1. 92-21). 3 claims.

1,703,638. Impregnated individual paper drinking cup. James D. Reifsnyder, assignor to Tulip Cup Corporation, New York, N. Y. Filed Dec. 31, 1921. (C1. 229-3.1). 8 claims.

1,703,693. Artificial wool. Gino M. Rossati, Padua, Italy, and Giuseppe de Blasio, New York, N. Y. Filed Jan. 18, 1928. (Cl. 92-10). 8 claims.

1,703,745. Operation of pulp digesters. Einar Morterud, Torderod, near Moss, Norway. Filed Feb. 25, 1927. (Cl. 92-7). 4 claims.

1,703,830. Process of isolating cellulose. Joseph Otis Pierce and Warren T. Reddish, assignor to The Twitchell Process Company, Cincinnati, Ohio. Filed Oct. 14, 1926. (Cl. 92-9). 17 claims. Use of a mineral oil sulphonic reagent.

MAR. 5, 1929.

1,703,961. Process of producing papers having a glossy surface. Albrecht Schmidt, Gerhard Balle and Kuno Franz, assignors to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. Filed Jan. 6, 1928. (Cl. 92-40). 7 claims.

1,704,055. Carton. Warren A. Morris, assignor to The Richardson Company, Lockland, Ohio. Filed May 27, 1927. (Cl. 229-17). 12 claims.

1,704,139. Paper truck. Alfred J. Morrow, Oakland, Calif. Filed Feb. 16, 1927. (Cl. 280-57). 2 claims.

1,704,216. Paper-manufacturing system. Leland S. Rosener and David H. Peterson, Jr., assignors to The Paraffine Companies, Inc., San Francisco, Calif. Filed July 28, 1924. (Cl. 92-1). 26 claims. Conveying device.

1,704,533. Hydration by pump pressure. Judson A. De Cew, assignor to Process Engineers, Incorporated, New York, N. Y. Filed Apr. 7, 1926. (Cl. 92-20). 9 claims. Use of Jordan.

MAR. 12, 1929.

1,704,706. Method and apparatus for treating and handling fibrous pulp. Jesse Barnum Hawley, assignor to Arvey Manufacturing Co. Filed Nov. 9, 1921. Renewed Aug. 17, 1928. (Cl. 92-61). 6 claims.

1,704,728. Paper-making method and apparatus. Judson A. De Cew, New York, N. Y. Filed Feb. 21, 1928. (Cl. 92-20). 16 claims. Method of removing gases from paper stock.

1,704,739. Carton. George R. Grigg, San Jose, Calif. Filed Oct. 4, 1927. (Cl. 229-29). 7 claims.

1,704,797. Rotary paper-gumming machine. Joseph G. Huye, New Orleans, La. Filed June 24, 1926. (Cl. 91-50). 1 claim.

1,704,853. Calender-doctor-operating mechanism. Earl E. Berry and Frederick W. Lodding, assignors to Rice, Barton and Fales, Incorporated, Worcester, Mass. Filed Feb. 4, 1928. (Cl. 92-74). 6 claims.

1,705,015. Roofing material. Andrew H. Irving, assignor to The Paraffine Companies, Inc., San Francisco, Calif. Filed Nov. 22, 1922. (Cl. 154-51). 8 claims.

1,705,924. Machine for forming containers from plastic material. Fred W. McArdle, assignor to Fred L. Pigeon, East Boston, Mass. Filed Aug. 17, 1927. (Cl. 92-63). 19 claims.

1,705,090 Method of impregnating composition board. Gustave Klinkenstein and Gustave D. Magnus, assignors to Maas and Waldstein Co., Newark, N. J. Filed May 6, 1927. (Cl. 91-70). 3 claims.

1,705,097. Wood grinding machine. Robert E. Read, assignor to Internationals Paper Company. Filed July 22, 1927. (Cl. 83-75). 19 claims.

1,705,405. Method of producing copying paper. Ernst Hodler, assignor to Transkrit A. G., Zurich, Switzerland. Filed Dec. 22, 1926. (Cl. 91-68). 5 claims. (Carbon paper).

1,705,424. Process for the production of cellulose by decomposition of vegetable fibers. Otto Carl Strecker, Darmstadt, Germany. Filed Feb. 25, 1927. (Cl. 92-9). 14 claims.

MAR. 19, 1929.

1,705,516. Drying system. Frederick C. Farnsworth, Norristown, Pa. Filed June 2, 1926. (Cl. 34-48). 13 claims.

1,705,537. Saturating paper. Reed P. Rose and Harold E. Cude, assignors to General Rubber Company, New York, N. Y. Filed Dec. 11, 1925. (Cl. 92—21). 1 claim.

1,705,780. Method of making composition tubs. John Olson, Minneapolis, Minn. Filed June 5, 1926. (Class. 92—54). 8 claims.

1,705,827. Method of pulping wood. Francis G. Rawling, Madison, Wis. Filed Sept. 17, 1927. (Cl. 92—11). 16 claims. (Sodium sulphite, the sodium salt of a weakly ionized polybasic acid and an excess of carbon dioxide up to 190° C.)

1,705,897. Bleaching of pulp. Linn Bradley and Edward P. McKeefe, New York, N. Y., and Montclair, N. J. Filed Mar. 16, 1922. (Cl. 8—2). 19 claims.

1,705,907. Method of and means for deinking fibrous material. Jennings De Witt, New York, N. Y. Filed July 14, 1927. (Cl. 92—13). 13 claims.

1,705,908. Deinking apparatus. Jennings De Witt, New York, N. Y. Filed July 27, 1927.) (Cl. 92—13). 10 claims.

1,706,007. Paper container. Durlin N. Van Alstyne and James Van Alstyne, Fulton, N. Y. Filed Jun 29, 1927. (Cl. 229—5.6). 2 claims.

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1,706,660. Box suspension for suction rolls. Hiland R. Farnsworth, assignor to The Paper and Textile Machinery Co., Sandusky, Ohio. Filed Jan. 11, 1928. (Cl. 92—53). 35 claims.

1,706,661. Wall board. Samuel Greenebaum, Kansas City, Mo. Filed Jan. 21, 1928. (Cl. 82—18). 1 ciaim.

1,706,840. Waterproof paper and process of producing the same. Albert L. Clapp, assignor to Bennett, Incorporated, Boston, Mass. Filed Feb. 27, 1926. (Cl. 92—21). 6 claims.

1,706,841. Greaseproof and waterproof paper and method of producing the same. Albert L. Clapp, assignor to Bennett, Incorporated, Boston, Mass. Filed Feb. 27, 1926. (Cl. 92—21). 9 claims.

1,706,910. Apparatus for making paper containers. Wilbur L. Wright and Joseph T. Bond, assignor to Oswego Falls Corporation, Fulton, N. Y. Filed Apr. 20, 1927. (Cl. 93—59). 14 claims.

1,706,944. Machine for refining paper and pulp. Ludwig H. Wensel, assignor to The Hermann Manufacturing Company, Lancaster, Ohio. Filed July 2, 1927. (Cl. 92—27). 18 claims.

1,706,952. Suction feed roller. Albert Broadmeyer, assignor to The W. O. Hickok Mfg. Co., Harrisburg, Pa. Filed Nov. 19, 1926. (Cl. 271—27). 19 claims.

1,707,209. Suction feed roller. Albert Broadmeyer, assignor to The W. O. Hickok Mfg. Co., Harrisburg, Pa. Filed Nov. 19, 1926. (Cl. 271—27). 8 claims.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

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The Reconciliation of Furnish to Production on a Bone-Dry or Air-Dry Basis*

By Wm. Fischer, Curtis & Bros., Inc., Newark, Del.

When I came into the paper business I was supposed to be some kind of an accountant but knew nothing about making paper. I was there a year or so before I found out what we put into the beaters to produce paper, to get off the weight and get off the quality.

Used Invoice Weights

The system under which I first worked used invoice weights, that is, we bought the pulp on an "air-dry" basis, "bone dry" plus nine per cent of that figure; we charged that in and added in the sizing, weight of dye, and weight of clay, and the difference between that and the paper we got off was called "invisible waste." When we made different kinds of paper, and the formulas varied, we could not reconcile the figure of furnish used to paper produced on the basis of any previous performance. And so, we came to the conclusion that we should work out a figure that would form a ratio of materials used, to paper produced. And we decided to go back to the papermaker's or chemist's formulas. So we went back to "bone dry" pulp and "Bone-dry" clay, and worked out the equivalent in paper produced.

Put All Figures on Bone Dry Basis

Now we found that in our mill ninety-seven pounds of "bone-dry" pulp would produce one hundred pounds of "air-dry" paper and "air-dry" broke. We found that one hundred pounds of "bone-dry" clay would produce sixty pounds of paper. We eliminated the weight of rosin sizing, alum, glue and dyes. We used the sum of "bone-dry" and sixty percent of the "bone-dry" clay to establish an equivalent in paper and broke produced. We put all the figures on a "bone-dry" basis rather than "air-dry." That is, taking four cents for "air-dry" pulp, we made that figure 4.44 cents for "bone-dry" pulp. The sum of these figures, divided by the number of pounds of paper produced, gave us a unit price for the furnish, that is, an average unit price. Our mill made short runs, sometimes one and two beater lots. The way we buy pulp—and your experience is the same, probably—we find that occasionally the bundles vary some, perhaps ten per cent. And if we used an average figure, the only thing available, one time we might produce eleven hundred pounds of paper, and another time we would produce nine hundred pounds of paper. And according to the figures turned in, of materials used, the materials used would be the same in both cases. In other words, one time it might cost us seventy dollars for a beater of nine hundred pounds, and another time it would cost seventy dollars for a beater of eleven hundred pounds. So we used the ratio of 97 to 100, and any gain or loss between the furnish and the paper produced was taken up or dropped at the average price, as worked out on a "bone-dry" basis.

We had a little trouble for the first six or eight months, in establishing this ratio. At first we used 95 to 100, and then 96 to 100, and finally 97 to 100. We worked over a period of a year and found that 97 to 100 is, for our mill, pretty nearly correct.

Used Twenty Brands of Pulp

Over the last year we must have used twenty different brands of pulp. We found that in soda pulp, and certain brands of American pulp, the weights of the bundles of pulp varied a great deal. Some domestic pulps vary as much as ten per cent from the average invoice weight of the bundle. The foreign pulp seems to run pretty uniform.

Now in mills where you have save-all systems, my ratios won't be correct. Each mill must work out its own ratio. It does not make any difference whether you figure on an "air-dry" basis or "bone-dry" basis so long as we find the relation of the materials put in, to the paper produced. However, if we use "bone-dry" weights in our mill, we find that the average unit price of the stock is so close to the average unit price of the paper, (that is, figuring materials alone and leaving out mill expenses) that we are able to glance at an order and tell whether or not the material cost of that paper is higher or lower than normal, and immediately we can correct the thing before it gets into the beaters. We look over all our beater orders, figure out the percentages of clay, figure out from that what the ash content of the paper is going to be; we figure out the rosin size on a dry rosin basis, which is very important. Now then, when the papermaker comes to us and says, "How much does this cost, and why" We are able to go back to the papermaker's formulas, rather than the cost accountant's formulas. I can find out the cost of any paper on an invoice basis, but if I don't know anything about the retention of clay or moisture content of the paper, I cannot know in advance what a paper is going to cost, because I don't know how much we are going to get off from it. But if I go back to a "bone-dry" basis, and consider the retention of clay, then I know in advance just exactly what a paper is going to cost.

* Presented at the convention of the Cost Association of the Paper Industry at the Waldorf-Astoria Hotel, New York, Feb. 20, 1929.

We, in the last year, by working out uniform furnishes, saved I think about thirteen thousand dollars out of two hundred and fifty thousand dollars. We have a small mill. You fellows are working in a lot bigger figures than we are. But *what we get back, for what we put in,* as to weight and quality, is what we were able to find.

Now I have worked out a number of furnishes to see what results we would get, figuring on the different bases. Figuring on a bone-dry basis, I found that if we made a test of a certain run, and weighted every single thing that went in on a "bone-dry" basis, and weighed everything that came off the paper-machines on an "air-dry" basis, then we could, by doing that, establish this ratio.

On an "air-dry" basis, on the furnish I have here, (referring to chart) we got nine hundred and ninety net pounds of good paper at a cost of seventy-one dollars. The "air-dry" pounds of furnish, not including size, alum and so forth, was eleven hundred pounds. So there we got a ratio of eleven hundred to nine hundred and ninety, or 100:90. On the "bone-dry" basis, taking the same figures, we got nine hundred and ninety pounds of "air-dry" paper to nine hundred and ninety pounds of "bone-dry" pulp and clay retained or 100:100, 3% broke included.

Now, using invoice weights, as a great many of us do, and adding all these together, we find a curious thing. A number of mills, (a mill where I worked before and mills whose cost systems I am familiar with), add the invoice weights of the materials I have here, including rosin, size, talc, clay, alum and so forth, and would get a sum of 1282 pounds of materials that went into the beaters, and get off 990 pounds of paper. If we changed the formula and put in more or less sizing or filler, our ratio would no longer be correct, and we could not determine in advance how much paper we would get off. And so my point is that it is equally convenient, from a cost standpoint, to use "air-dry" pounds, as it is to use "bone-dry" pounds, but not invoice pounds. The "bone-dry" basis will give us a figure very close to the unit material cost of the paper. And moreover, it gives the cost accountant the same view of his costs as the chemist, the papermaker and the technical man has.

So I feel that if we figure our costs from a weight produced and quality standpoint rather than from a material used standpoint, that those we work with will have a better grasp and an instantaneous grasp of what we are doing.

Knowing Your Business Inside and Out*

To numerous business men, the use of statistics in a practical way constitutes a mysterious science and the making of graphic charts is thought an art to be practised only by the highly skilled. In reality, however, statistics and charts may be readily and easily utilized with profitable results. Indeed, it is vitally important in these days of intensive competition that all business enterprises, whether large or small, make full use of the statistics of their own operations, if they would attain their utmost possibilities.

Such notably powerful and successful companies as the U. S. Steel, General Motors and General Electric Corporations find it impossible to operate adequately without full statistical knowledge not only of general business conditions but also of their own activities in relation to those general conditions. If highly developed, strongly intrenched concerns find statistical study a necessary adjunct to their operations, how can smaller and weaker enterprises hope to succeed by proceeding in the old-fashioned, blindfolded manner of past generations?

A Matter of Simple Arithmetic

Statisticians have so long surrounded their profession with a halo of technical language that it is perhaps little wonder so many business men shudder at the thought of venturing into statistical fields without expert assistance. Yet, as a matter of fact, those statistical methods which are most practical for business usage are merely a matter of such simple processes of arithmetic as are taught in all secondary schools. The statistics which a business must use for comparative and forecasting purposes are merely the figures which that business has always compiled or could easily gather.

Every business that lives for any length of time has records of its sales, its production, its collections, its orders and countless other factors which go to make up the operations of that business. The use of these statistics for comparison with the operations of competitors or for determining future trends calls only for the application of the statistics in the proper direction with an ordinary degree of common sense.

Let us suppose that an executive of some company is, without any previous experience in this particular direction, charged with the responsibility of making a thorough study of all his firm's statistics, the records of the firm's industry as a whole, and such information as is available regarding those general business conditions as affect his company's activities—the purpose of such study being to aid his firm in better directing current operations and in planning more carefully for the future. How would this executive proceed with his task?

Of course, detailed procedure would vary somewhat in different types of business, but a general method of action may be suggested.

The first step, quite logically, would be to gather all available statistics for a reasonably long term of years past—perhaps ten years would ordinarily suffice. These statistics should all cover frequent and regular periods, monthly data being those most often used. When we say all available statistics should be collected we mean just that; we do not mean figures of the individual business only, we refer also to figures covering operations of the industry and such other outside data as will bear upon the activities of this particular enterprise. If a firm is engaged in producing furniture, for instance, it should gather all the existing statistical information regarding supplies which it must buy and should have at hand all available figures relating to residential construction in the territories in which it sells.

The second step is to group the collected statistics into their various classes and then to study them with several ends in view. The data may be studied purely from the internal viewpoint—that is, internal figures relating only to the specific company's operations may be considered in order to determine various relationships, such as the relationship between orders and production, etc. Or figures for the industry as a whole may be compared with figures for the business,—a comparison of orders might be made to determine how the company stands with relation to the industry. Or statistics bearing upon activities of the company's customers might be studied carefully, perhaps in an effort to find some factor which gives advance warning of a change, upward or downward, in the purchasing power of these customers.

The Use of Graphic Charts Important

The use of graphic charts greatly facilitates the study of statistics. For a chart will picture trends and relationships which are otherwise often obscure or are ascertainable only by long study of columns of figures. As evidence of this let us quote from an interview given some time ago to "Trade Winds," a publication of the Union Trust Company, Cleveland, by A. H. Landwehr, treasurer and manager, of the Holland Furnace Company. He said: "We feel that the day is definitely past when the executives in any business of even moderate size can safely rely wholly on a balance sheet and monthly statement as his sole statistical guide. Whatever I wish to know about or keep in touch

* From "Economic Trends."

with about our business of a statistical nature, I have presented to me in the simplest, clearest and most vivid form so that its true significance cannot escape me on a hasty examination; and for a large proportion of the facts I need, the graphic chart happens to be that simplest, clearest and most vivid form. . . . Charts and the accompanying figures become the starting point for nearly all executive activity with me, not merely in routine control but also in laying out a program for the future. . . . As to the preparation of the charts, this does not take much time and is not costly. As to the use of charts, I started using them and continue to use them because they enable me to keep in touch with our business and to control it with the least amount of time and the greatest effectiveness of any method I have ever heard of."

The Line Chart

For analyzing business figures, the line chart is probably the most valuable type. It derives its name from the fact that the points on the chart, which represent a series of figures, are connected by a line which goes up and down in the same degree that the figures themselves go up and down. Thus, for any one series of figures, we can see at once the high points, the low points and the general trend or tendency of the whole. If two or more series of figures are charted on the same sheet, their resulting lines will show whether the figures in one series go up or down at the same time that the figures in the other series go up or down, will show the extent to which they rise or fall and will enable us to see whether one series tends to increase or decrease at a faster rate over its whole extent than the others. The construction of such charts is exceedingly simple, particularly now that specially designed chart sheets have removed the tedious necessity of ruling one's own sheets.

We usually want to know, in business, how certain things vary as time goes on. Therefore, we use a chart sheet that is divided horizontally into equal spaces representing equal periods of time—days, weeks, months or years. Vertically we have a scale so divided that, with the aid of it, we may lay off our figures above their corresponding time intervals. For the sake of convenience, this vertical scale is usually divided into units of 10. We may mark our scale to include any range of figures we desire and each division point may represent one unit or a million units, as the case demands.

Comparative and Forecasting Data

Returning now to our discussion of the logical methods of procedure in studying statistics, we may say that such study will, particularly in graphs, reveal certain relationships that are significant. It will be found that some types of figures are purely comparative and have no reference to future possibilities. Thus, a line of production and a line of sales may be strictly comparative, revealing how closely production is being kept in line with sales. On the other hand, a line of orders may be found to indicate for a short period in advance the trend of production, pointing out turning points. This relationship would be of a forecasting nature, the order line being valuable in making production plans.

All sorts of other relationships and forecasting possibilities will be revealed through the charting and careful study of a firm's internal statistics and pertinent external figures. External facts and figures pertaining to nearly all industries may be procured from the U. S. Department of Commerce, the Federal Reserve Banks, private banks and concerns which make a business of supplying such data.

To illustrate, we can show a picture of the sales of an individual firm compared with the sales of its industry. The original data may be considered as having been reduced to percentages. That is, the sales for both the firm and the industry have, for each month, been expressed as percentages of the monthly average figures for 1919. After the percentage has been chartered on the graph, the chart may be studied and found to reveal two outstanding points. One is that upward and downward swings in sales of the individual firm tend to be more sharp, judging by the past, than do such swings for the industry as a whole.

Sales Changes Forecast

Even more significant than this point, however, might be the fact that important changes in direction in sales of the industry may tend to precede such changes in the sales of the individual firm.

Of course, in actual cases sales for the industry might not change direction earlier than sales for an individual company. Yet there are very many times when various sets of figures can be contrasted in such manner that one line will prove a valuable forecaster for the other. It is this type of relationship that should be sought in studying statistics. Think how valuable to any business is a statistical indicator which will under ordinary circumstances reveal future trends, thus making possible careful planning.

Continuous Study Necessary

Let us return once more to our executive who is making a study of his firm's statistics. After he has compared all available statistics, in chart form, and selected those combinations which yield valuable clues to the current status of his company's activities as well as those indicators which seem to have forcasting value, he should have these combinations and forecasting indicators charted by themselves and should keep the figures continuously plotted up to date. It is only by continuous usage of the information revealed in his studies that really profitable results will be attained.

Should Study Anti-Trust Statutes

Abram F. Myers, in an address before the National Industrial Conference Board, Inc., in New York, on December 20, proposed that before any further attempt be made to amend anti-trust laws a careful and thorough study of the existing statutes and their effect be made by a committee appointed by Congress for that purpose. Mr. Myers, discussing the anti-trust laws and their effect, said in part:

"It is most gratifying that the National Industrial Conference Board, with its distinguished membership, its highly trained experts and its splendid record of accomplishment in industrial research, has turned its attention to the timely and important subject of the anti-trust laws and the method of their enforcement.

Prevailing Misconceptions

"My purpose will be to point out some of the prevailing misconceptions regarding the purpose and effect of the anti-trust statutes; to suggest the advisability of careful scientific investigation and the formulation of a definite program before the matter is put in the channels of political action; and finally, to suggest, by way of warning, some of the alternatives to a complete abandonment of the competitive system which the anti-trust laws prescribe.

"It is essential to a study of the anti-trust laws that there should be an accurate understanding of the purpose of those laws and of their actual bearing on the ever expanding and changing business of the Nation. The anti-trust laws cannot be discredited and their repeal effected by attributing to them a purpose and effect which they do not have. A few days ago I read an article by a well-known writer on financial subjects who advocated the repeal of the Sherman Law because 'it has for its purpose the glorification of cut-throat competition.' That is an old charge and has

* Law and Labor.

often been hurled at the Sherman Law; and I sometimes wonder if those who repeat the charge really believe it, or whether they merely assume it is what the world of business wants to hear.

"A moment's reflection would serve to remind these critics that it was the destructive, cut-throat competition of the 'Standard Oil Trust' and the 'Tobacco Trust' which distinguished them from the Steel Combination and the Harvester Combination, and caused them to be branded as monopolies, whereas the latter were acquitted of charges of law violation. In other words, the Sherman Law has been invoked and has proved effective to prevent the very kind of competition which its critics say it was designed to foster and protect. And the test whether a given combination is lawful or unlawful depends largely on whether the competition it affords is fair or oppressive.

How the Sherman Law Should Be Judged

"The Sherman Law should not be judged save in the light of the circumstances surrounding its enactment and the evils at which it was aimed. It was passed at a time when industrial combinations were growing at a rate which seemed even to the most conservative to threaten the economic structure of the country. Publicists not given to exaggeration predicted that the time was not far distant when each industry would come under the control of a single corporation, and all such corporations would be merged into a huge supercombination, which would dominate the business of the United States.

"The combinations then being formed and which were the target of the act were not the products of an orderly development and expansion of business. They were for the most part imposed on the industries affected by outsiders who were inspired mainly by the prospect of stock-jobbing commissions and promotion fees. Prosperous and self-sufficient units were placed under a common corporate control, wholly without regard to considerations of operating efficiency. Capitalization had no relation to investment, and it was a common thing to take over plants paying exaggerated prices therefor in the preferred shares of the combination, and to issue an equal amount of common stock as bonus or for the promoters to unload on a hopeful public.

Extermination of Competition

"Those great combinations, as soon as formed, turned their attention to the extermination of such competitors as remained outside the fold. Competitive warfare was waged with a ruthlessness which now can scarcely be imagined, and could not possibly be repeated. The ultimate object was believed to be exploitation of the public; and in view of the manner in which those combinations were formed and conducted, who can say that there was no foundation for such fears? But whether well-founded or not, those fears were real, and they serve to illustrate the underlying purpose of the statute to which they gave birth. And the country may well pause and consider whether it would favor the return of a situation which would cause such ghosts to again stalk abroad.

"If you would object that the language of the act is broader than its purpose as here defined, and that its wording should be narrowed accordingly, I would reply that the courts have anticipated this objection and have healed the defect through the effective agency of judicial interpretation. If the rule of reason means anything, it is that the act is to be interpreted and applied in the light of the requirements of modern business; that ancient conceptions of monopoly and restraint of trade interest shall not prevail where the effect would be detrimental to the public interest by interfering with the normal and orderly conduct of business; and that the law shall be so applied as to further, and not impede, the current of progress toward a better and safer economic situation.

Formula Ideal on Paper

"In other words, the Sherman Act as construed and enforced does not prevent the formation of such mergers as are incidental to the normal development and expansion of business, or such contracts and arrangements as are designed to eliminate unfair competition and economic practice, so long as they in the domestic market encourage combination in the export trade. On paper the formula is ideal. Competition in trade and commerce to the water's edge, as a spur to efficiency and for the protection of our own citizens; combination in the foreign trade to meet the challenge of the state monopoly, the comptoir, and the cartel. That it is successful is attested by the ever-increasing volume of our foreign trade, which is not due merely to the fact of combination, a privilege that has been availed of by surprisingly few industries, but to the salutary policy of competition which has kept American industry efficient and alert and has protected it against the mummifying effects of unified operation.

Differences Between U. S. and Other Nations

"Moreover, there are other policies which distinguish the United States from the nations which allow to their industries an unlimited right of combination, and which seem to me to justify our policy of free and open competition. It has been the policy of this country to develop quickly its natural resources by encouraging its manufacturers through a protective tariff. The primary purpose of the tariff is to give to the protected industry the benefit of the home market. The corollary of such a policy is that the industry enjoying such protection should not be permitted arbitrarily to exploit the people, and the safeguard against such exploitation is competition.

"Therein lies the difference between the United States and England, which has no anti-trust statute but relies on the limitations of the common law as applied in civil proceedings. England is practically a free-trade country, open to competition from all parts of the world, so that domestic producers cannot exploit the public for any great length of time. Of the policy of Germany, France, Russia, etc., nothing need be said, because economic and political conditions in those countries are so different and the degree of interference with what in this country is regarded as private business is so much greater than the people of the United States would tolerate.

"It goes without saying that American industry would not willingly exchange the policy of the anti-trust laws for a policy of free trade or of minute governmental supervision.

The Question Which Gives Pause

"If not the competitive system of industry under statutes and administrative policies sufficiently elastic to permit of the greatest efficiency in industry consistent with the maintenance of that system, then what? That is the question which causes me to pause in the consideration of proposals for modifying or repealing the anti-trust statutes. Is it going too far to say that the choice is between an enlightened as distinguished from a destructive competition, on the one hand, or a degree of public regulation approximating socialism on the other?"

Wisconsin Cost Meeting

An announcement has been received from Miss I. M. Carney, secretary-treasurer of the Wisconsin Division of the Cost Association of the Paper Industry, announcing that a meeting of this division will be held at the Wausau Hotel, Wausau, Wis., on Tuesday, April 23, at 1:30 p. m. The speaker will be H. G. Crockett, partner in the firm of Scovell, Wellington & Co., of New York, who has consented to speak on the subject of "Shrinkage Costs."

As this is a subject of vital interest to accountants and Mr. Crockett is known to be an able speaker, Miss Carney expects a large attendance at this meeting, and requests all mills, whether members of the association or not, to advise her as early as possible if they expect to send representatives to this meeting. Letters should be addressed to Miss I. M. Carney, secretary-treasurer, Wisconsin Division, Tomahawk Kraft Paper Company, Tomahawk, Wis.

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F. M. Stephens Made Vice Pres. of Bryant Co.

Frank M. Stephens, vice president in the capacity of sales manager and mill contact man of the Seaman Paper Company, Chicago, has been made vice president and director of sales and a member of the directorate of the Bryant Paper Company, Kalamazoo, Mich., and will take up his new duties at once, it was announced April 5, by Mr. Felix Pagenstecher, president of the Bryant Paper Company.

The move is by mutual arrangement between the Seaman and Bryant companies. The Seaman Company has acted as sales agents for the Bryant Company's product virtually since the inception of the Kalamazoo mill, and the change will even more closely cement the relationship between the two organizations, Mr. Pagenstecher said.

"As mill contact man for the Seaman Company, Mr. Stephens has been closely associated with the Bryant mills for several

F. M. STEPHENS

years, and he now will be able to concentrate more directly and thoroughly on the products of the Bryant mills to the mutual advantage of both companies," he said.

It was pointed out that the introduction into the Bryant organization of a man trained not only in paper manufacture but in printing and general paper use is another step in the closer knitting together of the paper industry from maker to consumer, with special stress on a more thorough knowledge and understanding of printing and practical printing problems on the part of the manufacturer.

Mr. Stephens has spent his business life advertising, printing, purchasing, selling and the manufacture of paper and paper products. For eight years he was with Armour & Co., Chicago, packers, as purchasing agent for all forms of lithographic and printing material. He became associated with the Seaman Company in 1913 and has been an officer and director since 1924.

His work in mill contact for the Seaman Company has brought him a wide acquaintanceship among paper manufacturers throughout the country. Recently he has been working on the standardization of all grades handled by Seaman organizations.

Dexter Sulphite Pulp & Paper Co. Expands

[FROM OUR REGULAR CORRESPONDENT]

DEXTER, N. Y., April 8, 1929.—The Dexter Sulphite, Pulp and Paper Company is undergoing expansion. It was announced last week by company officials that a large new addition will be ready for occupancy within six weeks and it is planned to use the major portion for the bleaching of sulphite pulp. The new addition is 180 by 100 feet and consists of two stories and a basement. It is planned to remove a considerable portion of the machinery in several of the old units to the new plant when completed and indications are that the structure will be running full blast by June 1. The new mill is of fireproof construction built entirely of reinforced concrete and steel and only the very latest machinery and apparatus for bleaching the product of the pulp mill will be installed.

The new plant when running full will have a capacity output of 100 tons of sulphite daily which will be an increase of about fifty per cent over the present output. About half of the pulp turned out will be bleached by the very latest methods and the finished product will be used principally in mills making the better types of bond and ledger paper. With the new structure running the bag factory will have a daily capacity of 3,500,000 paper bags which will be made in 17 different sizes and in various grades. A considerable portion of the machinery in the bag plant was made in the machine shop operated in connection with the main plant. There are 36 bag manufacturing machines to be operated with many of them having a capacity output of 20,000 bags an hour.

A portion of the bleached product is used in the firm's mill here for use in manufacturing various lines of waxed paper for bread and fruit wrappers and food containers. A section of the company's bag factory is now in operation on the top floor of the new addition where many sizes of grocery paper bags are being turned out for shipment to all parts of the country east of the Mississippi. About 85 per cent of the entire plant is now electrified and eventually the entire system will be operated by electricity. The extensive improvement and expansion program being carried out by the company has included the rebuilding of all of the large dams and the new construction is entirely of concrete. A new power plant has also been constructed and is now in operation.

As soon as the complete plant is ready for operation early in June it is planned to employ many additional hands. Several hundred workers will comprise the total working force which is already being enlarged.

Demands for the product of the bag factory have made necessary the taking over of additional space and installation of considerable new and modern equipment. Products of the sulphite mill find a ready market in all parts of the country. The entire factory is operated under the supervision of James E. Campbell and Clarence A. Campbell, principal owners.

Exports of Writing Paper From Germany Larger

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 17, 1929.—Shipments of writing papers from Germany to foreign countries during January amounted to 4,260,169 pounds valued at $327,964, an increase of 18 per cent compared with the corresponding month in 1928, according to the Department of Commerce.

Chief countries of destination for these exports were the United Kingdom, which took 19 per cent, the Netherlands, which took 10 per cent, Argentina, which took 17 per cent, and other South American countries, which took a total of 16 per cent.

In addition to writing papers, 105,159 pounds of papeteries valued at $35,938, and 430,999 pounds of envelopes valued at $61,642 were shipped abroad during January. Exports of the last two products were slightly under those of the corresponding month last year.

Michigan Paper Traffic Men Elect Officers

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., April 8, 1929.—The Michigan Paper Mills Traffic Association met Tuesday afternoon of last week in the Pythian building and re-elected all officers for the ensuing year as follows: President, Alex. G. Gilman, president of the Allied Paper Mills; vice-president, F. M. Hodge, president of the Kalamazoo Paper Company; secretary, George S. Davos, secretary of the Allied Paper Mills; treasurer, C. S. Campbell, president of the First National Bank and Trust Company and treasurer of the Kalamazoo Vegetable Parchment Company; traffic manager, James Dougherty. The affairs of the association are said to be in excellent condition.

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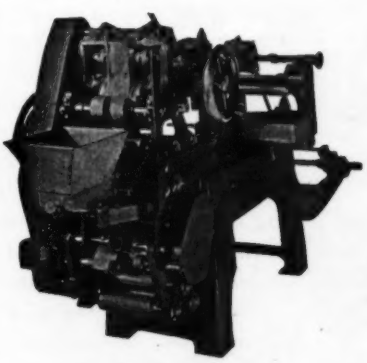

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NEW YORK IMPORTS

WEEK ENDING APRIL 13, 1929

SUMMARY

Cigarette paper .....1812 cs.
Wall paper .....74 bls., 12 cs.
Paper hangings .....34 bls., 27 cs.
News print .....367 rolls
Printing paper .....84 cs.
Wrapping paper .....5 rolls, 112 cs.
Packing paper .....6 cs.
Transfer paper .....29 cs.
Decalcomania paper .....41 cs.
Baryta coated paper .....239 cs.
Surface coated paper .....6 cs.
Gold coated paper .....6 cs.
Metal paper .....18 cs.
Marble paper .....2 cs.
Tissue paper .....68 cs.
Aluminum paper .....9 cs.
Colored paper .....74 cs.
Filter paper .....45 bls., 7 cs.
Drawing paper .....1 cs.
Writing paper .....83 cs.
Parchment paper .....22 bls.
Stencil paper and ink .....89 cs.
Strawboard .....376 rolls
Miscellaneous paper
4458 rolls, 24 pkgs., 1069 bls., 207 cs.

CIGARETTE PAPER

De Manduit Paper Corp., Indep. Hall, St. Nazarie, 908 cs.
American Tobacco Co., Indep. Hall, Bordeaux, 573 cs.
Max Spiegel & Son, St. Louis, Hamburg, 17 cs.
Standard Products Corp., De Grasse, Havre, 214 cs.
British American Tobacco Co., Homeric, Southampton, 50 cs.
British American Tobacco Co., Aquitania, Southampton, 50 cs.

WALL PAPER

A. C. Dodman Jr., Inc., Pr. Harding, Bremen, 7 bls., 1 cs.
J. E. Bernard & Co., Pr Harding, Bremen, 3 cs.
Universal Car Loading Co., Muenchen, Bremen, 1 cs.
Universal Car Loading Co., American Merchant, London, 14 bls.
S. Stern Stiner & Co., St. Louis, Hamburg, 2 bls.
F. J. Emmerich, St. Louis, Hamburg, 36 bls., 2 cs.
Irving Trust Co., St. Louis, Hamburg, 4 cs.
Wedeman Godknecht & Lally, St. Louis, Hamburg, 12 bls.
Globe Shipping Co., St. Louis, Hamburg, 3 bls.
A Bartlett, Acquitania, Southampton, 1 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., Minnewaska, London, 34 bls., 9 cs.
Whiting & Patterson Co., Inc., Aquitania, Southampton, 18 cs.

NEWS PRINT

Hudson Trading Co., Kungsholm, Gothenburg, 219 rolls.
Stora Kopparberg Corp., Kungsholm, Gothenburg, 78 rolls.
F. Heiejes Jr., St. Louis, Hamburg, 70 rolls.

PRINTING PAPER

F. L. Kramer & Co., Aurania, Southampton, 2 cs.
Tamm & Co., Muenchen, Bremen, 8 cs.
E. Dietzgen & Co., N. Amsterdam, Rotterdam, 20 cs.
J. Henschel & Co., St. Louis, Hamburg, 5 cs.
P. C. Zuhlke, Arabic, Antwerp, 41 cs.
Keuffel & Esser Co., Liberty, Havre, 8 cs.

WRAPPING PAPER

H. Reeve Angel & Co., Inc., Nessian, Antwerp, 4 cs.
Birn & Wachenheim, Nessian, Antwerp, 15 cs.
Birn Birn & Wachenheim, Arabic, Antwerp, 62 cs.
Standard Products Corp., Arabic, Antwerp, 14 cs., 5 rolls.
Steffens Jones Co., Arabic, Antwerp, 10 cs.
F. C. Strype, Arabic, Antwerp, 7 cs.

PACKING PAPER

Gevairt Co. of America, Nessian, Antwerp, 6 cs.

TRANSFER PAPER

F. L. Kramer & Co., Mnenchen, Bremen, 29 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Antonia, Liverpool, 25 cs.
L. A. Cousmiller, Karlsruhe, Bremen, 6 cs.
C. W. Sellers, Karlsuhe, Bremen. 10 cs.

BARYTA COATED PAPER

Globe Shipping Co., Pr. Harding, Bremen, 60 cs.
J. H. Schroeder Banking Corp., Pr. Harding, Bremen, 71 cs.
J. H. Schroeder Banking Corp., Karlsruhe, Bremen, 58 cs.
Globe Shipping Co., Karlsuhe, Bremen, 26 cs.
Gallagher & Asher, Muenchen, Bremen, 28 cs.

SURFACE COATED PAPER

P. Puttmann, Nessian, Antwerp, 15 cs.
Gevaert Co. of America, Nessian, Antwerp, 164 cs.
Brown Bros. & Co., St. Louis, Hamburg, 5 cs.
P. C. Zuhlke, Arabic, Antwerp 55 cs.

GOLD COATED PAPER

F. Murray Hill Co., Muenchen, Bremen, 6 cs.

METAL PAPER

Hensel Bruckmann & Lorbacher, Muenchen, Bremen, 18 cs.

MARBLE PAPER

L. de Jouge & Co., Carlier. Antwerp, 2 cs.

TISSUE PAPER

B. F. Drakenfeld & Co., Antonia, Liverpool, 5 cs.
Old Master Paper & Pulp Co., St. Louis, Hamburg, 61 cs.
F. C. Strype, Korsholm, Hango, 25 cs.

ALUMINUM PAPER

Catty Foil Co., Arabic, Antwerp, 9 cs.

COLORED PAPER

Borden Riley Paper Co., Nessian, Antwerp, 6 cs.
Borden Riley Paper Co., Arabic, Antwerp, 8 cs.
S. Gilbert, Muenchen, Bremen, 31 cs.
J. Beckhard, Muenchen, Bremen. 28 cs.
P. H. Petry & Co., St. Louis, Hamburg, 1 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnewaska, London. 6 cs.
H. Reeve Angel & Co., Inc., Homeric, Southampton. 15 bls., 1 cs.
C. G. Euler, La Bourdonnais, Bordeaux, 30 bls.

DRAWING PAPER

H. Reeve Angel & Co., Inc., Minnewaska, London, 1 cs.

WRITING PAPER

H. Reeve Angel & Co., Inc., Minnewaska, London, 1 cs.
American Express Co., Executive, Marseilles, 75 cs.
Quality Art Novelty Co., La Bourdomais, Bordeaux, 2 cs.
Independent F'd'g. Co., Aquitania, Southampton, 5 cs.

PARCHMENT PAPER

Walker, Goulard, Plehn Co., St. Louis, Hamburg, 22 bls.

STENCIL PAPER AND INK

Arlac Dry Stencil Co., St. Louis, Hamburg, 89 cs.

STRAWBOARD

A. Vuyk, N. Amsterdam. Rotterdam, 174 rolls.
C. H. Powell & Co., N. Amsterdam, Rotterdam, 202 rolls.

MISCELLANEOUS PAPER

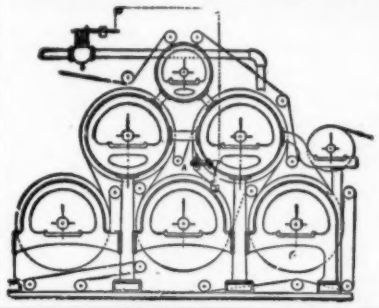
L. K. Liggett Co., Pr. Harding, Bremen, 4 bls.
Tamm & Co., Pr. Harding, Bremen, 3 cs.
S. Gilbert & Co., Pr. Harding, Bremen, 3 cs.
Universal Car Loading Co., Pr. Harding, Bremen. 19 cs.
H. Reeve Angel & Co., Inc., Kungsholm, Gothenburg, 170 rolls.
Wilkinson Bros & Co., Inc., Kungsholm, Gothenburg, 447 rolls, 129 bls.
C. K. Mac Alpine & Co., Kungsholm, Gothenburg, 292 bls.
Steiner Paper Corp., Hamburg, Maru Kohe, 3 cs.
Heusel Bruckman & Lorbacher, Muenchen, Bremen, 3 cs.
Steiner Paper Corp., N. Amsterdam, Rotterdam, 40 cs.
Dingelstedt & Co., N. Amsterdam, Rotterdam, 9 cs.
Globe Shipping Co., N. Amsterdam, Rotterdam, 82 cs.
Irving Trust Co., N. Amsterdam, Rotterdam, 13 cs.
Hennsoth Basse & Co., N. Amsterdam, Rotterdam, 24 pkgs.
The Borregaard Co., Inc., Minnequa, Gothenburg, 2643 rolls, 404 bls.
Arkell Safety Bag Co., Minnequa, Gothenburg, 337 rolls.
Gilbert Paper Co., Minnequa, Gothenburg, 216 rolls, 87 bls.
Crepe Kraft Co., Minnequa, Gothenburg, 78 rolls.
C. G. Winans Co., Minnequa, Gothenburg, 597 rolls, 20 bls.
Thos. Barrett & Son., Minnequa, Gothenburg, 133 bls.
Morrison Co., Inc., St. Louis, Hamburg, 3 cs.
P. H. Petry & Co., De Grasse, Havre, 12 cs.
Coenca Morrison & Co., De Grasse, Havre, 3 cs.
Cranson & Montgolfier, De Grasse, Havre, 38 cs.
Keller Dorian Paper Co., De Grasse, Havre, 22 cs|

RAGS, BAGGINGS, ETC.

E. J. Keller Co., Inc., Coahoma County, ——, 45 bls. new cuttings.
A. W. Fenton, Inc., Coahoma County, Rotterdam, 5 bls. rags.
Johns Manville Corp., Coahoma County, Rotterdam, 80 bls. rags.
Millers Falls Paper Co., Coahoma County, Rotterdam, 5 bls. rags.
E. J. Keller Co., Inc., Indep. Hall, ——, 45 bls. rags.
Interstate Trust Co., Indep. Hall, St. Nazaire, 73 bls. rags.
A. W. Fenton, Inc., Indep. Hall, St. Nazaire, 84 bls. rags.
V. Galaup, Indep. Hall, St. Nazaire, 47 bls. rags.
Madison State Bank, Pr. Harding, Bremen, 16 bls. rags.
A. W. Fenton, Inc., Pr. Harding, Bremen, 36 bls. rags.
Bank of The Manhattan Co., Aurania, Southampton, 15 bls. rags.
Brown Bros. & Co., Minnewaska, London, 46 bls. rags.
Merchants National Bank, Muenchen, Bremen, 51 bls. rags.
The Barret Co., Hektor, Barcelona, 106 bls. rags.
The Barret Co., Kektor, Barcelona, 53 bls., packing.
Warren Man'f'g. Co., Hektor, Barcelona, 62 bls. packing.
L. J. Fischer, Inc., Hektor, Barcelona, 27 bls. picker waste.
Fidelity Trust Co., Hektor, Barcelona, 136 bls. rags.
A. W. Fenton, Inc., N. Amsterdam, Rotterdam, 65 bls. rags.
Overton & Co., N. Amsterdam, Rotterdam, 22 bls. rags.
G. W. Millar & Co., N. Amsterdam, Rotterdam, 18 bls. rags.
Merchants National Bank, N. Amsterdam, Rotterdam, 50 bls. rags.
S. Birkenstein & Son, Cabo Villano, Santander, 82 bls. rags.
S. Birkenstein & Son, Cabo Villano, Bilbao, 88 bls. rags.
Brown Bros & Co., Cabo Villano, Pasages, 214 bls. rags.
Chase National Bank, Sinaia, Alexandria, 280 bls. rags.
Interstate Trust Co., Sinaia, Alexandria, 111 bls. rags.
Arrowhead Mills, Kyno, Antwerp, 220 bls. rags.
Katzenstein & Keene, Inc., Kyno, Antwerp, 241 bls. bagging.
Merchants National Bank, Kyno, Antwerp, 54 bls. rags.
Whaling Waste Products Co., Kyno, Antwerp, 143 bls. rags.
Overton & Co., Kyno, Antwerp, 210 bls. bagging.
Royal Manufacturing Co., Kyno, Antwerp, 76 bls. cotton waste.
Ayres, W. C., Jones Co., Executive, Genoa, 95 bls. cotton waste.
Leigh Textile Co., Executive, Genoa, 77 bls. cotton waste.
American Express Co., Anaconda, Antwerp, 35 bls. rags.
Castle & Overton, Inc., Isarco, Genoa, 6 bls. hemp cuttings.
Castle & Overton, Inc., Isarco, Genoa, 112 bls. rags.
Banco Commercial Italiane Trust Co., Isarco, Leghorn, 101 bls. bagging.
Equitable Trust Co., Bolinier, Antwerp, 173 bls. flax waste.
Castle & Overton, Inc., London Exchange, Scotland, 87 bls. threads.
Castle & Overton, Inc., Dresden, Germany, 49 bls. rags.

(Continued on page 72)

The Pickles Drying Regulator



WE ARE SAFE IN OUR PROPOSITION

YOU'LL MAKE NO MISTAKE IN ACCEPTING IT

Pickles Drying Regulator

will do everything we claim for it and more. The test costs you nothing until you are satisfied. Many mills tried one and now have every machine equipped. Write for list of users and other information.

W. F. PICKLES Buckland, Conn.

The BC -INC.

QUALITY PULPS

IMMEDIATE DELIVERY FROM DOCK

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KRAFT HURUM NORWAY SPECIAL "HURUM SPECIAL" Extra Strong Kraft

KOOS BAC "BAMBLE" Extra Strong Kraft

Fresh Monthly Consignments from Abroad—No Closed Winter Season

The Borregaard Company Incorporated

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THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY

CANTON, MASS.

Woolen manufacturers since 1856

EASTWOOD

FOURDRINIER-CYLINDER-WASHER

WIRES

EASTWOOD WIRE CORPORATION, BELLEVILLE N.J. U.S.A.

Imports of Paper and Paper Stock

(*Continued from page 70*)

Castle & Overton, Inc., Cameronia, Scotland, 174 bls. rags.
Castle & Overton, Inc., Amania, England, 50 bls. rags.
E. J. Keller Co., Inc., Saco, ——, 42 bls. rags.
E. J .Keller Co., Inc., Saco, ——, 17 bls. thread waste.
E. J. Keller Co., Inc., Saco, ——, 158 bls new rags.
E. J. Keller Co., Inc., Sinaia, ——, 280 bls., rags.
W. Schall & Co., St. Louis, Hamburg, 37 bls. Jute card waste.
V. Galaup, Liberty, Dunkirk, 42 bls. rags.
Darmstadt Scott & Courtney, Liberty, Dunkirk, 42 bls. rags.
Ayres, W. C. Jones Co., Liberty, Havre, 32 bls. cotton waste.
American Express Co., Liberty, Havre, 13 bls. rags.
Overton & Co., Liberty, Havre, 220 bls. bagging.
D. I. Murphy, Liberty, Havre, 112 bls. bagging.
V. Galaup, Liberty, Havre, 231 bls. rags.
1st National Bank of Boston, Sorvard, Barcelona, 130 bls. cotton waste.
Bank of The Manhattan Co., Sorvard, Marseilles, 48 bls. fleshings.
French American Banking Corp., Sorvard, Leghorn, 45 bls. rags.
S. Birkenstein & Son, Sorvard, Valencia, 46 bls. rags.
Chemical National Bank, Karlsruhe, Bremen, 54 bls. thread waste.
E. Mayes, Saco, Rotterdam, 139 bls. rags.
Bank of The Manhattan Co., Saco, Rotterdam, 314 bls. rags.
Chase National Bank, Saco, Rotterdam, 217 bls. rags.
A. W. Fenton, Inc., Saco, Rotterdam, 3 bls. rags.
I. Horowitz, Saco, Rotterdam, 10 bls. rags.
E. Butterworth & Co., Inc., Bellflower, Manchester, 194 bls. paper stock.
New York Trust Co., Bellflower, Manchester, 112 bls. bagging.
E. J. Keller Co., Inc., Bellflower, ——, 68 bls. bagging.
E. J. Keller Co., Inc., Bellflower, ——, 102 bls. paper stock.

OLD ROPE

W. Steck & Co., Coahoma County, Rotterdam, 51 coils.
W. Steck & Co., Pr. Harding, Bremen, 76 bls.
Brown Bros. & Co., Nessian, Antwerp, 90 bls.
Brown Bros. & Co., Hektor, Marseilles, 60 coils.
Brown Bros. & Co., N. Amsterdam, Rotterdam, 31 coils, 41 bls.
Anglo South American Trust Co., N. Amsterdam, Rotterdam, 48 coils.
Overton & Co., N. Amsterdam, Rotterdam, 49 coils.
H. Miller, Ancon, Cristobal, 81 bdls.
Bank of The Manhattan Co., Cabo Villano, Pasages, 414 bls.
Brown Bros. & Co., Chicago City, Bristol, 81 coils.
Brown Bros. & Co., Titania, Geneva, 22 bls.
Brown Bros. & Co., Carlier, Antwerp, 65 bls.
Brown Bros. & Co., Liberty, Havre, 164 rolls.
Brown Bros. & Co., Saco, Rotterdam, 62 bls.
Banco Commercial Italiane Trust Co., Sorvard, Leghorn, 99 coils.
N. E. Berzen, Sorvard, Malaga, 213 coils.

CASEIN

National City Bank, American Legion, B. Ayres, 1142 bags.
Equitable Trust Co., American Legion, B. Ayres, 417 bags.
Kalbfleisch Corp., American Legion, B. Ayres, 834 bags.
Atterbury Bros., Inc., American Legion, B. Ayres, 1250 bags.
A. Klipstein & Co., La Bourdonnais, Bordeaux, 334 bags.
Standard Chemical Products Co., Liberty, Havre, 17 bags.
A. Hurst & Co., De Grasse, Havre, 534 bags.

WOOD PULP

M. Grottesman & Co., Inc., Coahoma County, Rotterdam, 1005 bls. sulphite 100 tons.
Atterbury Bros., Inc., Hellig Olav, Oslo, 750 bls. wood pulp 150 tons.
Farmers Loan & Trust Co., Hellig Olav, Oslo, 200 bls. wood pulp 25 tons.
E. M. Sergeant & Co., Kungsholm, Gothenburg, 299 bls. dry soda pulp.
Johansson Wales & Sarre, Inc., Kungsholm, Gothenburg, 299 bls. dry soda pulp.
Perssons & Weidhorn, Carlier, Antwerp, 29 cs. wood pulp.
Perssons & Weidhorn, Arabic, Antwerp, 23 cs. wood pulp.

WOOD PULP BOARDS

Lagerloef Trading Co., Pr. Harding, Bremen, 176 bls.
Lagerloef Trading Co., Korsholm, Hango, 818 bls.

WOOD FLOUR

State Chemical Co., Coahoma County, Rotterdam, 575 bags, 32,410 kilos.
The Burnet Co., Kungsholm, Gothenburg, 872 bags.
A. Kramer & Co., N. Amsterdam, Rotterdam, 300 bags.
State Chemical Co., N. Amsterdam, Rotterdam, 400 bags.
The Bakelite Corp., Saco, Rotterdam, 1003 bags, 79260 kilos.

PORTLAND IMPORTS

WEEK ENDING APRIL 13, 1929

Lagerloef Trading Co., Bird City, Helsingfors, 677 bls. sulphite 101 tons.
Pager Horton & Co., Inc., Bird City, Stockholm, 4000 bls. sulphate 812 tons.
Pagel Horton & Co., Inc., Bird City, Stockholm, 750 bls. sulphite 152 tons.

PHILADELPHIA IMPORTS

WEEK ENDING APRIL 13, 1929

V. Galaup, Indep. Hall, St. Nazaire, 216 bls. rags.
Katzenstein & Keene, Inc., Indep. Hall, St. Nazaire, 499 bls. rags.
Castle & Overton, Inc., Indep. Hall, St. Nazaire, 1158 bls. rags.
D. I. Murphy, Indep. Hall, St. Nazaire, 232 bls. rags.
Salomon Bros. & Co., Indep. Hall, St. Nazaire, 163 bls. rags.
Goldman Sachs & Co., Indep. Hall, St Nazaire, 100 bls. rags.
P. Berowitz, Indep. Hall, St. Nazaire, 232 bls. rags.
Katzenstein & Keene, Inc., Indep. Hall, Bordeaux, 266 bls. rags.
Castle & Overton, Inc., Indep. Hall, Bordeaux, 790 bls. rags.
Salomon Bros & Co., Indep. Hall, Bordeaux, 46 bls. rags.
A. W. Fenton, Inc., Indep. Hall, Bordeaux, 303 bls. rags.
V. Galaup, Indep. Hall, Bordeaux, 45 bls. rags.
D. I. Murphy, Indep. Hall, Bordeaux, 271 bls. rags.
E. J. Keller Co., Inc., Indep. Hall, ——, 133 bls. rags.
C. B. Richard & Co., Chicago City, Bristol, 145 bls. rags.
Bank of The Manhattan Co., Executive, Naples, 41 bls. rags.
Stora Kopparberg Corp., Korsholm, Stockholm, 800 bls. wood pulp.
Equitable Trust Co., Korsholm, Stockholm, 500 bls. sulphate.
Lagerloef Trading Co., Korsholm, Hango, 340 bls. wood pulp boards.
Neidich Process Co., Korsholm, Hango, 80 cs. tissue paper.
Parsons & Whittemore, Inc., Korsholm, Hango, 154 bls. wood pulp.
Castle & Overton, Inc., Anaconda, Antwerp, 1033 bls. rags.
Katzenstein & Keene, Inc., Anaconda, Antwerp, 1396 bls. rags.
Brown Bros. & Co., Anaconda, Antwerp, 271 bls. rags.
Irving Trust Co., Anaconda, Antwerp, 20 bls. cotton waste.
E. J. Keller Co., Inc., Anaconda, ——, 190 bls. rags.
Castle & Overton, Inc., Isarco, Genoa, 26 bls. rags.
Castle & Overton, Inc., Ambridge, Antwerp, 1070 bls. rags.
Mac Blaine & Co., Ambridge, Antwerp, 50 bls. rags.
Brown Bros. & Co., Ambridge, Antwerp, 148 bls. rags.
E. Butterworth & Co., Inc., Ambridge, Antwerp, 69 bls. rags.
D. I. Murphy, Ambridge, Antwerp, 159 bls. rags.
Katzenstein & Keene, Inc., Ambridge, Antwerp, 61 bls. rags.
S. Birkenstein & Son, Ambridge, Antwerp, 104 bls. rags.
Philadelphia National Bank, Ambridge, Antwerp, 47 bls. rags.
E. J. Keller Co., Inc., Ambridge, ——, 66 bls. rags.
E. J. Keller Co., Inc., Ambridge, ——, 79 bls. old rope.
S. Birkenstein & Son, Liberty, Dunkirk, 40 bls. rags.
National Waste Co., Liberty, Dunkirk, 58 bls. thread waste.
Katzenstein & Keene, Inc., Liberty, Dunkirk, 354 bls. thread waste.
D. I. Murphy, Liberty, Dunkirk, 102 bls. rags.
O. G. Hempstead & Co., Liberty, Havre, 1 cs. Wall paper.
W. J. Jones & Co., Liberty, Havre, 5 cs. Wall paper.
Castle & Overton, Inc., Liberty, Havre, 51 bls. new cuttings.
Castle & Overton, Liberty, Dunkirk, 395 bls. rags.
V. Galaup, Liberty, Havre, 318 bls. rags.
Katzenstein & Keene, Inc., Liberty, Havre, 17 bls. rags.
Salomon Bros. & Co., Liberty, Havre, 208 bls. rags.
A. Hurst & Co., Liberty, Havre, 110 bls. rags.
D. I. Murphy, Liberty, Havre, 951 bls. rags.
E. J. Keller Co., Inc., Liberty, ——, 256 bls. rags.
Castle & Overton, Inc., Sorvard, Valencia, 168 bls. rags.
Interstate Trust Co., Sorvard, Leghorn, 207 bls. rags.
Banco Commercial Italiane Trust Co., Sorvard, Leghorn, 93 bls. rags.
Castle & Overton, Inc., Westfalen, Germany, 324 bls. wood pulp.
Castle & Overton, Inc., Bellepline, Holland, 256 bls. rags.
Castle & Overton, Inc., Burgerdyk, Holland, 680 bls. wood pulp.
Castle & Overton, Inc., London Merchant, England, 56 coils old rope.
Castle & Overton, Inc., City of Flint, Scotland, 598 bls. waste.
Castle & Overton, Inc., New York City, England, 220 bls. rags.
E. J. Keller Co., Inc., Vermont, ——, 122 bls. rags.
E. J. Keller Co., Inc., Exmoor, ——, 75 bls. rags.
E. J. Keller Co., Inc., Exmoor, ——, 77 bls. old rope.
E. J. Keller Co., Inc., Hagen, ——, 53 bls. rags.

BALTIMORE IMPORTS

WEEK ENDING APRIL 13, 1929

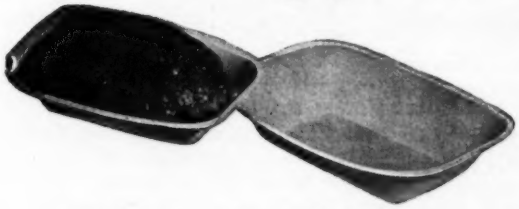
Katzenstein & Keene, Inc., Indep. Hall, St. Nazaire, 151 bls. rags.
S. Shapira & Sons, Indep. Hall, St. Nazaire, 46 bls. rags.
Congoleum Nairn Co., Indep. Hall, Bordeaux, 58 bls. rags.
National City Bank, Indep. Hall, Bordeaux, 115 bls. rags.
Castle & Overton, Inc., Liberty, Havre, 52 bls. rags.
S. Shapira & Sons, Liberty, Havre, 723 bls. rags.
Katzenstein & Keene, Inc., Liberty, Havre, 61 bls. rags.
Congoleum Nairn Co., Liberty, Havre, 65 bls. rags.
E. J. Keller Co., Inc., Westport, ——, 334 bls. wood pulp.
Castle & Overton, Inc., Burgerdyk, Holland, 955 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING APRIL 13, 1929

Pagel Horton & Co., Inc., Minnequa, Gothenburg, 3000 bls. sulphite 508 tons.
Brown Bros. & Co., Minnequa, Gothenburg, 6000 bls., sulphate 1219 tons.
Brown Bros. & Co., Kyno, Hull, 312 coils old rope.
Brown Bros. & Co., Kyno, Hull, 63 bls. old rope.
J. Andersen & Co., Clara, Fiume, 525 bls. wood pulp.
J. Andersen & Co., Clara, Trieste, 525 bls. wood pulp.
Katzenstein & Keene, Inc., Ambridge, Antwerp, 105 bls. rags.

"Good strong *selling* points"



are what your salesmen like! They get plenty of them when they sell Paprus Dishes! For these dishes hold their shape like wood—yet sell for less than other dishes. They are made in one piece from moulded pulp. No folds—no staples—no holes for leakage—absolutely waterproof. Write for price list.

Paprus Dishes used as covered container

PAPRUS DISHES

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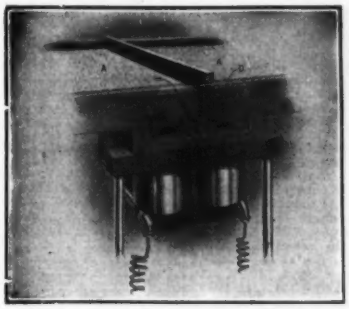
Are you making paper for insulating purposes? If so, our *Type B Iron Extractors* are a necessary part of your equipment.



Hundreds of these extractors are in use in the United States, Canada, and Europe. Write us for Bulletins and full data.

THE ROLAND T. OAKES CO.
Electrical Specialists Holyoke, Mass. *Established 1885*

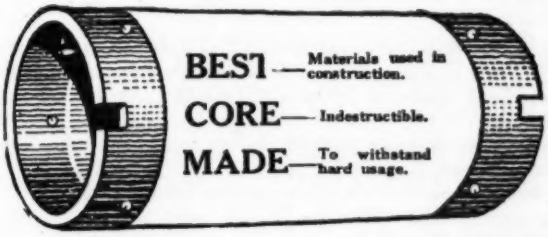
SHIPPING INSURANCE

The Use of

ELIXMAN CORES

protects your rolls and insures their delivery to your customer in perfect condition. They eliminate claims for damages.

SHIPPING INSURANCE



Your two sources of supply are

Canadian Elixman Company
HAMILTON, ONTARIO

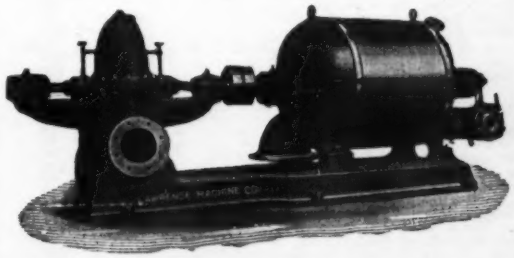
Elixman Paper Core Company
CORINTH, N. Y.

Horizontally Split Casing Double Suction Pumps

LAWRENCE PUMPS

The name protects and guarantees you satisfaction.

We are the original designers and builders of the LAWRENCE PUMP.



Lawrence pumps for all conditions and services. Forty-four years of practical experience with centrifugal pump development places us among the leaders. Our efforts have been rewarded by the acceptance of our product in general.

Thousands of installations and the successful performance of our pumps should be sufficient proof of our ability to handle your pumping problems. Our engineering force is at your command.

Have only Lawrence Pumps, manufactured by the

Lawrence Machine Company
361 Market St. Lawrence, Mass.

Paper Mill Stocks and Bonds

Quoted by Taylor & White, 45 Wall street, New York City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	ASKED
Abitibi Power & Paper 5s, 1943	90	91
Abitibi Power & Paper 6s, serially to 1934	100	102
American Writing Paper 6s, 1947	81	87
Bastrop Pulp & Paper 6½s, 1940	103	105½
Bedford Pulp & Paper 6½s, 1942	97	100
Belgo-Canadian Paper 6s, 1943	100	103
British-Columbia Pulp & Paper 6s, 1950	89	9-
Brown Paper Mills Serial 6s, 1941	97	100
Brown Company 5½s, 1946	98	101
Bryant Paper 6s, 1942	98	101½
Canadian Paper Board 7s, 19337	97	99½
Cape Breton Pulp & Paper 6s, 1932	103	...
Celotex Company 6s, 1929	95	99
Celotex Company 6½s, 1939	100	102
Celotex Company of Chicago, Debenture 6s, 1936	95	98
Central Paper Company Serial 6½s, 1942	86	89
Central Paper 7s, 1934	78	...
Champion Coated Paper Serial 6½s, 1934	100	...
Champion Coated Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 6s, 1941	100	102
Champion Fibre Notes 8s, 1930	95	...
Champion Paper Corp. 6s, 1945	95	98
Container Corp. of America Debenture 6s, 1936, ex-warrants	101	104
Continental Paper Products 6½s, 1943	90	99
Cornell Wood Products 7½s, 1937	103	...
Crown Willamette 6s, 1951	101	102
Dells Paper & Pulp Serial 6s, 1938	95	98
Dixon Board Mills Serial 6s, 1942	80	...
Donnaconna Paper 5½s, 1948	93	...
Eastern Manufacturing Co. 7s, 1938	97	100
Escanaba Paper Serial 6s, 1939	98	100
Escanaba Paper 6½s, 1935	96	99
Filer Fibre Serial 7s, 1935	90	95
Fort Irange Paper 7s, 1942	101	...
Fort William Paper 6s, 1946	100	104
Fraser Company 6s, 1950	103	105
Hammermill Paper Serial 6s, 1939	100	...
Hawley Pulp & Lumber 6s, 1946	96	...
Hawthorne Paper Company 6s, 1937	80	...
Hoberg Paper & Fibre 7s, 1937	94	97
Industrial Fibre Corp. Debenture 8s, 1933	100	...
Itasca Paper & Prairie River Power Serial 5½s, 1938	99½	...
Itasca Paper & Prairie River Power Serial 6s, 1938	99	...
Jessup & Moore First 6s, 1945	83	90
Kalamazoo Vegetable Parchment 6s, 1938	99	101
Lake Superior Paper 6s, 1941	105	108
Marathon Paper Mills Serial 5½s, 1942	99	101
Marinette & Menominee 7½s, 1936	103	105
Mead Pulp & Paper 5% Notes Serially, 1937	95	100
Mead Fibre 7s, 1937	97	101
Minnesota Ontario Paper Serial 6s, 1945	97½	100
Murray Bay Paper Serial 6½s, 1947	102	105
Munissing Paper Serial 6s, 1936	98	...
Nekoosa Edwards Paper 6s, 1928-42	96	...
Ontario Pulp & Paper 6s, 1931	108½	110½
Orono Pulp & Paper 6s, 1943	99	...
Orono Pulp & Paper 5s, 1941	96½	...
Oswego Falls Corp. 6s, 1941	99	102
Parker-Young Company 6½s, 1944	98	100
Paterson Parchment Paper 6s, 1938	101	103
Penobscot Chemical Fibre 6s, 1942	102	105
Port Alfred Pulp & Paper 5½s, 1947	98	100
Price Brothers 6s, 1943	105	...
Provincial Paper 5½s, 1947	98½	...
Queen City Paper 7s, 1933	98	...
River Raisin Paper 6s, 1936	98	100
Riordan Pulp & Paper 6s, 1942	102	104
Rolland Paper 6s, 1937	99	101
St. Croix Paper Serial 5s, 1937	99	...
St. Helen Pulp & Paper 6½s, 1931	99	102
St. Maurice Valley Corp. 6s, 1945	101	104
St. Maurice Valley Corp. 5½s, 1947	98½	100½
St. Regis Paper of Canada 6s, 1931	100	101½
St. Regis Paper of Canada 6½s, 1934	100	102
Smith (Howard) Paper Mills 7s, 1941	104	106
Spanish River Pulp & Paper 6s, 1931	108	110
Stevens-Thompson Paper 6s, 1942	94	96
Taggart Brothers 6s, 1944	95	100
Tait Paper & Color Industries 6s, 1934	88	92
Ticonderoga Pulp & Paper 5s, 1930	94	...
Ticonderoga Pulp & Paper 6s, 1940	100	102
Tomahawk Kraft Paper 6s, 1938	98	...
Tomahawk Pulp Paper 7s, 1932	99	...
Tonawanda Paper 5½s, Series 1941	99	102
Union Bag & Paper Power 6s, 1932	98	100
United Wall Paper Factories 6s, 1947	96	99
Warren (S. D.) Company 6s, 1945	103	105
Watab Paper 6½s, 1942	102	...
Waterway Paper Products 6s, 1931	100	101½
Wayagamack Pulp & Paper 6s, 1951	103	105
Westfield River Paper Serial 7s, 1943	89	93
Whitmer-Parson Pulp & Lumber 8s, 1938	20	25
Whitaker Paper 7s, 1942	108	110

STOCKS	BID	ASKED
American Box Board, Pfd.	9¼	10¼
American Box Board, Com.	9¼	10¼
Am. Tissue Mills, 7% Pfd.	90	93
British Columbia P. & P. Pfd.	75	80
Brompton Pulp & Paper, 8% Pfd.	100	...
Champion Fibre, 7% Pfd.	108	110
Diem & Wing, 7% Pfd.	92	97
Eastern Mfg. Co. 1st Pfd.	55	...
Great Northern Paper, Com.	75	78
Hammermill Paper, new 6% Pfd.	100	...
Hinde & Dauch, Com.	125	None Off.
Hinde & Dauch, 6% Pfd.	102	None Off.
Holyoke Card & Paper	160	None Off.
Marathon Paper Mills, Com.	150	...
Mengel Co., Pfd.	102	104
Midwest Box Co., 8% Pfd.	98	102
Midwest Box Co., 6% Pfd.	95	99
Louis De Jonge Co., 7% Pfd.	94	97
Oxford Papers Com.	195	...
Oxford Paper Co., Pfd.	108	111
Penobscot Chemical Fibre, Com.	80	...
Richardson Co., Com.	170	...
Sabin Robbins Paper Co., 8% Pfd.	105	110
St. Croix Paper	155	...
St. Regis Paper Co., 7% Cum. Prd.	105	108
Westfield River Paper Co., 1st Pfd.	Wanted	None off.
West Virginia Pulp and Paper Company	55	57
West Virginia Pulp and Paper, Pfd.	100	107
Whitaker Paper, 7% Cum. Pfd.	105	None Off.

Inspect Forest Products Laboratories

Members of the Ottawa branch of the Engineering Institute of Canada, to the number of 110, on the occasion of their monthly meeting, visited the main laboratories in Ottawa of the Forest Products Laboratories, Department of the Interior, and spent several hours viewing the modern equipment and studying the methods of work of that institution, which has only recently been established. The following official account of the visit will be of interest to readers of the PAPER TRADE JOURNAL:

"After a brief introductory explanation of the purposes and work of the laboratories, by T. A. McElhanney, the superintendent, the party inspected the various departments where the operations in progress were explained by the divisional officers. Practical demonstrations were given in timber mechanics, one of the chief attractions being the timber-testing machine which is the only one of its kind in Canada. Another wonderful contrivance seen in action was the hazard tester, a huge revolving drum which determines the amount of resistance crates and boxes of different sorts and sizes exert against careless and reckless handling. Standard specimens of forest products, such as cellulose derivatives, resin, and oil were exhibited and fully described; the processes of wood-preserving by creosoting ties and timber, together with the financial and structural advantages of the various processes were explained in detail; and an examination was made of the timber pathology display. The tour concluded with an interesting series of slides on timber physics.

"The main laboratories in Ottawa include in their work the mechanical testing of timbers, the utilization of wood waste, the study of wood decay, wood structure, the measurement of fibre lengths, the adhesive strength of wood glues, the holding power of nails and screws, the design of wood containers, the preservative treatment of woods, the relative properties of different preservatives, the seasoning of wood either naturally or in dry kilns, the distillation of hardwoods, and many other related problems."

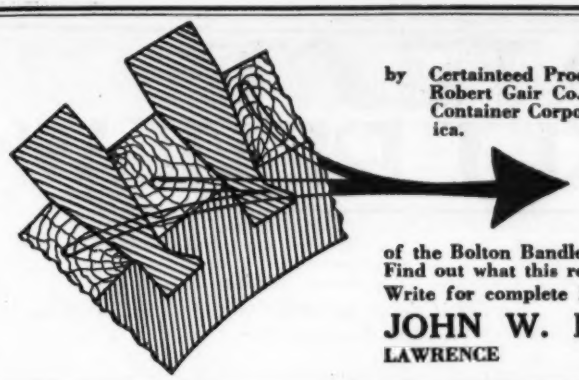
It may he stated that in addition to the main laboratories at Ottawa, there are branches in Vancouver and Montreal. The Vancouver branch deals with Pacific Coast woods, and the Pulp and Paper Division in Montreal is devoted to scientific research in that field. The Montreal laboratory, the work of which is carried on co-operatively by the Department of the Interior, the Canadian Pulp and Paper Association, and McGill University, is housed in the new Pulp and Paper building recently opened by His Excellency the Governor General.

International Shareholders To Meet April 24

The first annual meeting of the shareholders of the International Paper and Power Company will be held in Boston, Mass., on April 24. At this meeting directors will be elected, and it is proposed to authorize 2,000,000 additional shares of the Class C common stock of the company.

Although the directors of the company have no present plans for the issue of this additional Class C common stock, they think it wise that there be a larger amount available for issue.

The present common stock capitalization is 5,000,000 shares of Class A common of which 1,000,000 have been issued and over 900,000 shares are reserved for conversion of preferred stock; 3,000,000 shares of Class B common of which 1,000,000 shares have been issued; and 3,000,000 shares of Class C common of which 2,500,000 shares have been issued.



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by Certainteed Products Corp.
Robert Gair Co.
Container Corporation of America.
Kieckhefer Container Co.
Gypsum Co.
and many other mills

The Inverted Wedge Principle

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Find out what this revolutionary improvement means to *your* mill.
Write for complete information.

JOHN W. BOLTON & SONS, Incorporated
LAWRENCE MASSACHUSETTS
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WOODPULP

Foreign Domestic

Sole Selling Agents for

ASPA

Prime Swedish Kraft Pulp

CORONA

Bleached Sulphite

Kalamazoo Representative
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1414 Portage St. Kalamazoo, Mich.

The

ST. REGIS PAPER COMPANY

Daily Capacity 525 TONS

Newsprint
Catalog and Directory Papers
Fibre Wrapping Papers
Packers Oiled Manila
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General Sales Office
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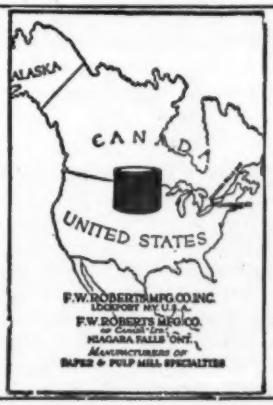
BURRS



BURRS

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, April 17, 1929.

Most of the business transacted in the local paper market during the past week was along routine lines. Demand for the various grades was seasonal and prices generaly remained steady and unaltered. Inquiries for future business are fairly numerous for the time of the year. Reports from the sales forces of the leading paper organizations are generally optimistic.

With newspaper advertising and circulation well ahead of last year at this date, the outlook for the news print market is more promising. Statistics compiled by the News Print Service Bureau show that production in the United States and Canada during the past week was maintained at 82 per cent of total capacity. Shipments averaged 86 per cent of rating.

Both production and business declined slightly in the paper board market. The price situation continues unsatisfactory. Some improvement was noticed in the fine paper market. Tissues are moving rather slowly. No radical changes were recorded in the coarse paper market. Wrapping paper is going forward in fair volume. Prices are geneally holding to schedule.

Mechanical Pulp

Steadiness prevails in the ground wood market. Offerings of both domestic and imported mechanical pulp are rather limited at present. Demand for the various grades is persistent and prices are steady to firm. Production has been curtailed somewhat of late and there is little talk of concessions around.

Chemical Pulp

The position of the chemical pulp market is practically unchanged. Demand for both imported and domestic grades was moderately active during the past week. Bleached sulphite continues exceptionally firm and kraft is steadier. Prices are generally being maintained at previously quoted levels, without difficulty, and shading is infrequent.

Old Rope and Bagging

Demand for old rope is heavy and prices continue to rise. Foreign manila rope is now quoted at from 4.40 to 4.65, while domestic manila rope is selling at from 4.75 to 5.00. Mixed strings are moving in good volume. The bagging market is becoming more active. Gunny scrap and scrap bagging are in better request and roofing bagging is also moving freely.

Rags

The paper mills are displaying more interest in the domestic rag market. Shirt cuttings are in excellent demand and prices are firmer. Washables are now quoted at from 4.75 to 5.25; Fancy at from 5.75 to 6.25, and Blue Overalls at from 7.50 to 8.00. The foreign rag market is also showing signs of improvement, and prices of the various grades are steadier.

Waste Paper

Conditions in the paper stock market were rather quiet during the past week. Demand from the board mills for the lower grades has fallen off slightly and quotations are somewhat easier. Book stock continues fairly steady and ledger stock is still moving in satisfactory volume. Sodt white shavings are showing signs of increased activity of late.

Twine

Trading in the twine market was fairly satisfactory during the past week. Demand for the various grades was well up to average for the season, influenced in some extent by the movement of wrapping paper, which is said to be proceeding at a normal pace. Prices are being maintained at the levels which have prevailed for some time past.

William Howard Dead

William Howard, a well known paper maker, died suddenly on March 31 at Fulton, N. Y., where he was visiting friends. He is survived by one son, Edwin Howard, of Yonkers, with whom he made his home since retiring from active business; one grand daughter, a sister, and one brother. Mr. Howard's wife died about a year ago. The body was taken to Turners Falls, Mass., for interment in the family lot.

Mr. Howard was 84 years old, and retired about eight years ago. Born in Devonshire, England, he learned his trade of paper making there, and worked in some of the largest mills in England and Scotland. Coming to this country he had worked in many states, also in Canada, where he was superintendent of the J. C. Wilson Company, for a number of years. He was also superintendent of the Victoria Paper Mills, at Fulton, N. Y., at two different times. Ever alert for improvement, he progressed with the times, and his knowledge of the manufacture of all kinds of paper left nothing to be desired. He was one of the six Howard brothers, all expert and noted paper makers, who in their day were second to none. Of this splendid group of paper makers, but one now remains, James Howard, of Hamilton, Ohio.

Many relatives and old time associates of Mr. Howard attended the services held at St. Andrew's Episcopal Church in Turners Falls, Mass., on April 2.

Slight Change in Swedish Pulp Prices

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 3, 1929.—Chemical pulp prices as quoted on the Swedish market underwent some changes during the second half of February, bleached sulphite being quoted on March 1 at $3.22 to $3.52, easy bleaching sulphite at $2.32 to $2.49, strong sulphite at $2.15 to $2.25 and strong sulphate at $2.07 to $2.19, all quotations per 100 pounds f.o.b. Swedish ports. Quotations on ground wood at the same time were approximately $10 to $11 per short ton for wet pulp and $24 to $27 for dry pulp. No changes were reported in prices quoted on news print, greaseproof, and wrapping papers.

Morgan L. Ellis Co. Broadens Field

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., April 15, 1929.—The Morgan L. Ellis Company, 301 Congress street, is broadening its field and handling paper specialties, such as paper napkins, drinking cups and other articles. Among the customers or prospective customers, are hospitals and other institutions. Earl R. Johnson, formerly sales manager of the Globe Paper Company, Inc., 110 Fulton street, has become vice president of the Morgan L. Ellis Company, and is in charge of the paper specialty department.

For "wire" boxes—permanent Bronze side rails with diagonally inserted sections of selected Vermont rock maple, with grain of the wood UPRIGHT.

You Need These Ten Great Advantages of Emerson End-of-Grain Suction Box Covers

1. 3 to 10 times the wear
2. Less "smoothing up"
3. Longer wire life
4. 10% power saving.
5. Easy to get quickly
6. Eliminates streaking
7. Increases suction
8. Fewer "washups"
9. No grit or splinters
10. Easy to install

Try them. See for yourself what a wonderful improvement they are. Write for full information and prices.

THE EMERSON MANUFACTURING COMPANY **LAWRENCE, MASSACHUSETTS**

The Emerson End-of-Grain Suction Box Cover for "felt" boxes.

BELLE ALKALI COMPANY, BELLE, W. VA.

LIQUID CHLORIDE BELLE BRAND CAUSTIC SODA

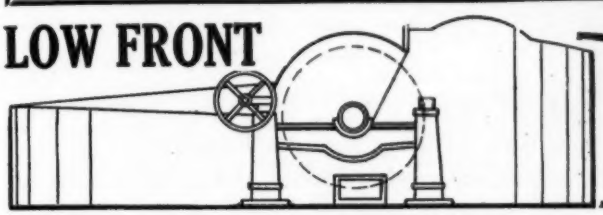
Cylinders—Ton Tanks—Tank Cars

Arnold, Hoffman & Co. Inc. Sole Agents

76%—Solid Liquid Flake

PROVIDENCE BOSTON NEW YORK
PHILADELPHIA CHARLOTTE

LOW FRONT



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244 Pat. features. Speeds of 25, 50, 100, 150 Ft. Min.

BURNING, CHOPPING, KNOTS entirely absent.

——Beaters reconstructed——

Leo Shlick Engineering Co., Mfrs. 314 Beacon St. Boston, Mass.

RAGS—BURLAP—BAGGING—ROPE

JUTE BUTTS, MAGAZINES, CATALOGS, OLD PAPERS, THREAD WASTE AND ALL GRADE OF RAGS CUT QUICKLY AND EFFICIENTLY WITH THE

GIANT The Standard of the World for 59 Years

Giant Rag Cutters have capacities of from 1 to 5 tons per hour

This is the GIANT 3-B CUTTER WITH A CAPACITY OF 3000 lbs. PER HOUR

TAYLOR, STILES & COMPANY, Riegelsville, N. J., U. S. A.

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Waterous, Limited
Brantford, Ont., Canada

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SOLE AGENTS FOR EUROPE
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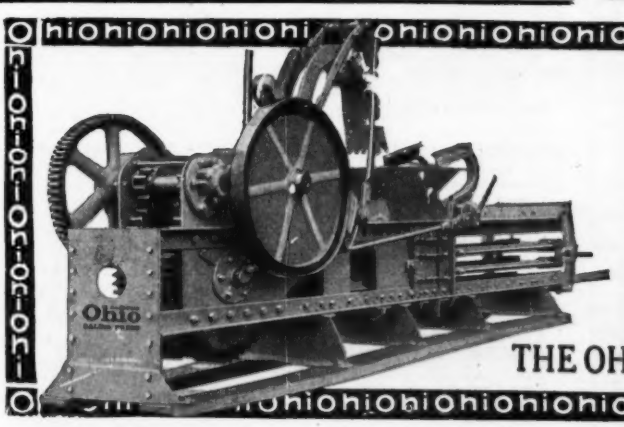
INCREASE MILL PRODUCTION
IMPROVE QUALITY OF PRODUCT
REDUCE STEAM COSTS

USED IN 200 MILLS MAKING DIFFERENT GRADES OF PAPER

FULTON ENGINEERING CO.
MIDDLETOWN, OHIO

WESTERN REP.—Woodbury & Wheeler Co., Portland, Oregon



FAMOUS **Ohio** BALING PRESS

Made in Three Sizes

There is no stopping, no lifting out of the plunger either for feeding in material, for tying up the bale, or removing it. All these things are necessary in the vertical press. They delay the operation, make more labor and cut down the output.

THE OHIO CULTIVATOR CO., Bellevue, Ohio

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, April 17, 1929.

BLANC FIXE.—The blanc fixe market is practically unchanged. Demand for both the pulp and the powder is mostly routine. Prices are steady. The pulp is quoted at from $42.50 to $45.00 per ton, while the powder is selling at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—No radical changes were recorded in the bleaching powder market. Shipments against contract are moving in satisfactory volume. Prices are generally holding to schedule. Bleaching powder is still selling at from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—Steadiness continues to prevail in the casein market. Domestic casein is still quoted at from 16 cents to 16¼ cents per pound, while standard ground imported is selling at 16 cents per pound and finely ground at 16¼ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Demand for caustic soda is persistent. Prices are generally holding to previously recorded levels. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are still selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—While the china clay market was rather quiet during the past week prices were maintained at previous levels. Imported china clay is quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—The chlorine market is exhibiting a strong undertone. Supplies are moving into consumption in good volume. Prices are steady. Chlorine is quoted at 3 cents per pound, in tanks, or multi-unit cars, at works, on standard contracts. The spot quotation ranges from 3¼ to 3½ cents per pound.

ROSIN.—Demand for rosin was light. At the naval stores, the grades of gum rosin used in the paper mills are quoted at from $8.10 to $8.50 per 280 pounds, ex dock, in barrels. Wood rosin is selling at from $6.60 to $7.40 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Conditions in the salt cake market are exceptionally firm. Demand from the paper mills is persistent and offerings are decidedly scarce. Salt cake is still quoted at from $16 to $18 per ton, while chrome salt cake is selling at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—The soda ash market is in a sound position. Shipments of this product are proceeding at a steady pace. Prices are holding to schedule without difficulty. Contract quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bags, $1.32½; and in barrels, $1.55.

STARCH.—Trading in the starch market was moderately active during the past week. Withdrawals against contract are well up to average. Prices remain unchanged. Special paper making starch is quoted at $3.82 per 100 pounds, in bags, and at $3.99 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Supplies of sulphate of alumina are moving into consumption in good volume. Demand is excellent and prices are steady to firm. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.55 and iron free at from $1.95 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—Business in the sulphur market is satisfactory for the season. Sulphur is still quoted at $18 per ton, in lots of 1,000 tons or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and nearby car loads, the quotation is $21 per ton.

TALC.—During the past week trading in the talc market was fairly active. Prices are generally being maintained at previously quoted levels. Domestic talc is quoted at from $16 to $18 per ton, at eastern mines, while imported talc is selling at from $18 to $20 per ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)		
Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine sized	8.00	@11.00
Book, Cased—		
S. & S. C.	6.00	@ 7.50
M. F.	5.75	@ 7.00
Coated and Enamel	7.50	@12.00
Lithograph	7.50	@12.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.35	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .80
Kraft	1.00	@ 1.10
Manila	.75	@ .80
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00
(Delivered New York)		
News, per ton—		
Rolls, contract	62.00	@ —
Rolls, spot	62.00	@ —
Sheets	67.00	@ —
Side Runs	47.00	@52.00
Boards—per ton—		
News	35.00	@42.50
Straw	52.50	@55.00
Chip	32.50	@40.00
Binders' Boards	65.00	@67.50
Sgl. Mla. Ll. Chip.	45.00	@47.50
Wood Pulp	80.00	@85.00
Container	52.50	@55.00
85 Test Jute Liner.	50.00	@52.50

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	28.00	@31.25
Dry	32.00	@34.00
(F. o. b. Mill)		
No. 1 Demestic	26.00	@29.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.75	@ 4.40
Easy Bleaching	2.90	@ 3.10
No. 1 strong unbleached	2.60	@ 2.80
Mitscherlich unbleached	2.60	@ 3.25
No. 2 strong unbleached	2.40	@ 2.50
No. 1 Kraft	2.40	@ 2.75
No. 2 Kraft	2.35	@ 2.50
Sulphate—		
Bleached	375	@ 3.85
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.40	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.75
News Sulphite	2.40	@ 2.50
Mitscherlich	3.00	@ 3.25
Kraft (Domestic)	2.50	@ 3.30
Soda Bleached	3.25	@ 3.40
Sulphate Screenings—		
Coarse	.75	@ .95
Refined	1.65	@ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.00	@11.50
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.50	@ 8.00
New Unbleached	11.00	@11.50
Washables	4.75	@ 5.25
Fancy	5.75	@ 6.25
Blue Overall	7.50	@ 8.00
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.15	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75
Old Rags		
White, No. 1—		
Repacked	5.50	@ 6.00
Miscellaneous	4.50	@ 5.00
White, No. 2—		
Repacked	3.00	@ 3.50
Miscellaneous	2.50	@ 2.75
St. Soiled, White	2.00	@ 2.15
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.55	@ 1.65
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.90	@ 1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50	@ 3.00
New Mixed Cuttings	2.75	@ 3.25
New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.50	@ 8.00
Unbleached Cuttings	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
Old Rags		
No. 1 White Linens	7.50	@ 8.25
No. 2 White Linens	5.75	@ 6.75
No. 3 White Linens	4.75	@ 5.25
No. 4 White Linens	3.00	@ 3.50
No. 1 White Cotton	5.50	@ 6.50
No. 2 White Cotton	4.50	@ 5.50
No. 3 White Cotton	3.00	@ 4.00
No. 4 White Cotton	1.90	@ 2.15
Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.20	@ 2.40
French Blue Linens	2.75	@ 2.85
German Blue Linens	2.35	@ 2.55
German Blue Cottons	2.15	@ 2.25
Checks and Blues	1.85	@ 2.00
Lindsay Garments	1.90	@ 2.00
Dark Cottons	1.65	@ 1.70
Old Shopperies	1.55	@ 1.60
New Shopperies	1.50	@ 1.60
French Blues	2.10	@ 2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.65	@ 1.75
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, Heavy	1.65	@ 1.75
Bright Bagging	1.65	@ 1.70
Small Mixed Rope	1.25	@ 1.40
Manila Rope—		
Foreign	4.40	@ 4.65
Domestic	4.75	@ 5.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, white, No. 1	3.25	@ 3.50
Hard, white, No. 2	2.40	@ 2.55
Soft, White, No. 1	2.50	@ 2.60
White envelope cuttings	3.25	@ 3.50
Flat Stock—		
Stitchless	1.60	@ 1.70
Overissue Mag.	1.60	@ 1.70
Solid Flat Book	1.50	@ 1.60
Crumpled No. 1	1.15	@ 1.25
Solid Book Ledger	2.00	@ 2.10
Ledger Stock	1.70	@ 1.80
New B. B. Chips	.65	@ .75
New Env. Cut	2.40	@ 2.60
Manilas—		
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.75	@ .80
Container	.60	@ .65
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	1.70	@ 1.80
News—		
No. 1 White News	1.65	@ 1.75
Strictly Overissue	.75	@ .80
Strictly Folded	.58	@ .63
No. 1 Mixed Paper	.45	@ .50
Common Paper	.30	@ .35

CLAY

EDGAR

400 Tons Daily

American made for American Trade

H. T. BRAND
COATING CLAY
and
High Grade Filler Clay

Edgar Clays are the result of almost half a century of experience in washing Clay. Technical service available for both coating and loading without charge.

Ask for Samples

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WOODPULP
AGENTS

PRICE & PIERCE, Ltd.,

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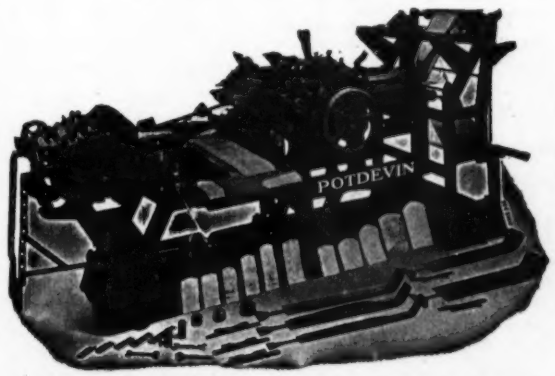
NEW YORK

NEW POTDEVIN PRINTING
SPECIALTY BAG MACHINERY



(Model 290) 2-Color Printing Flat & Square
40 Other Models

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West Virginia Pulp and Paper Company

Manufacturers of

SUPERCALENDERED
and
MACHINE FINISHED BOOK
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PAPERS

Offset, Envelope, Bond, Writing, Cover and Music Paper, High Grade Coated Book, Index Bristol, Post Card, Kraft and Label Papers.

also

Bleached Spruce Sulphite and Soda, Kraft Pulp

230 Park Ave. New York — 35 East Wacker Drive Chicago
503 Market St., San Francisco, Cal.
Sixth and Chestnut Sts., Philadelphia, Pa.

Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unfinished India—			
Basis	.13	@	.14
Paper Makers Twine			
Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.34
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05¾	@	.06¾
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¾	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	.03¾	@	.04
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	41.00
Solid News	47.50	@	—
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.20	@	2.25
White Env. Cuttings	2.40	@	2.50
No. 1 Soft Shavings	2.00	@	2.10
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.70	@	.75
Ledger & Writings	1.45	@	1.50
Solid Books	1.25	@	1.40
Blanks	1.40	@	1.50
Krafts	1.60	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.65	@	1.75
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.80	@	.85
Folded News (oversissue)	.80	@	.85
Old Newspapers—			
No. 1	.70	@	.80
No. 2	.65	@	.70
Mixed Papers—			
No. 1	.65	@	.70
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.06½	@	.07
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	75.00
News Board	38.00	@	42.00
Chip Board	35.00	@	40.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	53.00	@	55.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.44	@	1.54
Best Tarred, 3-ply	1.83	@	2.08

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.08½	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03½
Fancy			
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04½

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.45	@	1.55
No. 2 Books, light	1.20	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common paper	.50	@	.55
No. 1 Mixed Paper	.65	@	.70
Straw Board, Chip	.65	@	.70
Binders Board, Chip	.65	@	.70
Oversissue News	.85	@	.90
Old Newspaper	.65	@	.70

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 3—			
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75
Repacked	.02½	@	.02¾
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	—	@	.06½
No. 2 Kraft	.05¼	@	.06
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls	.009		52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	50.00
Single White, Patent Coated Newsboard Bender	67.50	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.15	@	1.20
White Blank News	1.60	@	1.65
Old Kraft	—	@	1.80
Print Manila	.80	@	.90
No. 1 Mixed Paper	—	@	.50
Overissue News	.65	@	.80
Old Newspapers	.55	@	.60
Box Board, Chip	.55	@	.60

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.60
Manila Rope—			
Foreign	4.50	@	5.00
Domestic	4.75	@	—
Mixed Strings	.90	@	1.00
Jute Wool Strings	—	@	1.00
Scrap Burlaps	1.25	@	1.35
Scrap Sisal	1.60	@	1.80
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	—	@	1.37½
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	2.75	@	3.00

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09½	@	.10
Silesias, No. 1	.06	@	.06¼
New Unbleached	.10	@	.10½
Fancy	.04	@	.04½
Washable	.04	@	.04¾
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¾
Khaki Cuttings	.04	@	.04¼
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03½
New Canvas	.08	@	.08¾

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.50	@	—
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags
(F. o. b. Boston)

Dark Cottons	1.60	@	1.65
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.10	@	5.50
New Checks & Blues	4.25	@	4.50
Old Fustians	1.90	@	—
Old Linsey Garments	1.85	@	1.90

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¼	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads)	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

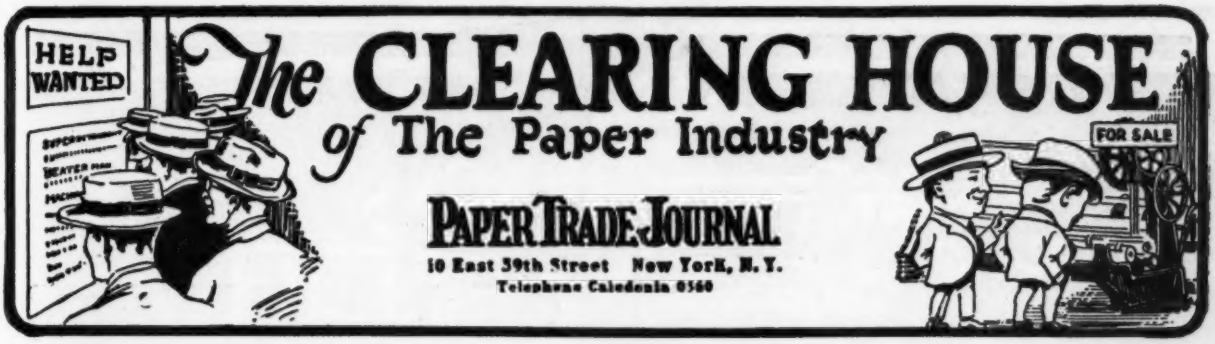
Ground Wood	30.00	@	31.00
Sulphite easy bleaching	62.00	@	—
Sulphite news grade	62.00	@	—
Sulphite, bleached	75.00	@	—
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.80	@	—
No. 1 Mixed Paper	.70	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.11½	@	—
Fancy Shirt Cuttings	.05½	@	—



"SITUATION WANTED" ADVERTISEMENTS.—4c a word, double rates for heavy face type. Minimum charge $1.00. If repeated ½ rate will be charged for each consecutive repetition

"HELP WANTED" ADVERTISEMENTS—4c a word, double rates for heavy face type. Minimum charge $1.00.

CLASSIFIED ADVERTISEMENTS—4c word, double rate for heavy face type. Minimum charge $1.00.
All classified "Help Wanted" and "Situation Wanted" advertisements are payable in advance

HELP WANTED

WANTED—Mechanical engineer with technical education and inventive ability; machine tender; assistant sales manager familiar with insulating wall board and similar products; draftsman; assistant superintendent; beater engineer; supervisor of repairs; back tender; supervisor for machine and production work; man to color paper. Paper Mill Dept., Charles P. Raymond Service, 294 Washington St., Boston. A-18

WANTED—Machine tender to operate and cut off asbestos board on 48" wet machine. Address, Box 29-232, care Paper Trade Journal. A-25

WANTED—Super calendar man on a 54" stack; experienced on book and knowing how to scour and keep stack in shape. Address, Box 29-233, care Paper Trade Journal. A-25

SUPERINTENDENT WANTED for new insulating and building board mill in the West. State age, experience and salary expected. Give essential information in first letter. Address, Box 29-184, care Paper Trade Journal. A-18

COMPETENT ASSISTANT TO SUPERINTENDENT OF COATING MILL—MUST HAVE EDUCATION AND PRACTICAL EXPERIENCE IN MECHANICAL ENGINEERING, MAINTENANCE AND GENERAL MILL SUPERVISION. ...PLY TO BOX 29-210, CARE PAPER TRADE JOURNAL, GIVING FULL DETAILS OF EDUCATION, EXPERIENCE, FAMILY (NUMBER OF CHILDREN), SALARY EXPECTED, ALSO REFERENCES. STRICTEST CONFIDENCE ASSURED. A-18

$3,000.00-$30,000.00 men find our Service effective in making connections. Individual. Confidential. Personally planned by JACOB PENN. All mill owners know him, believe in him. Not agency. Jacob Penn, Incorporated, 9 Park Place, New York. tf.

IF YOU are open to overtures for new connection, and qualified for a salary between $2,500 and $25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service, of recognized standing and reputation, through which preliminaries are negotiated confidentially for positions of the calibre indicated. The procedure is individualized to each client's personal requirements; your identity covered and present position protected. Established nineteen years. Send only name and address for details. R. W. Bixby, Inc., 117 Downtown Building, Buffalo, New York tf

WANTED—Roofing felt mill superintendent for one machine mill. Must be thoroughly experienced, and able to produce results. Address, Box 29-208, care Paper Trade Journal. A-18

WANTED—Experienced washerman on rag stock. Address, Box 29-241, care Paper Trade Journal. A-18

HELP WANTED

WANTED—Tour boss for roofing felt mill. Give education, experience, age and references. Address, Box 29-239, care Paper Trade Journal M-2

DAY FOREMAN in de-inking plant handling magazines, ledgers; cooking in closed beaters, using shredder. Address, Box 29-240, care Paper Trade Journal. A-18

EXPERIENCED toilet paper salesmen, both eastern and western territory. State full particulars. Address, Box 29-222, care Paper Trade Journal. A-18

BOSS BEATERMAN—Two machine mill in New England; familiar with rag papers and colors. First-class man only with best of references. Address, Box 29-204, care Paper Trade Journal. A-18

DRAFTSMAN and assistant to engineer in paper board mill. Previous experience desired. Mechanical graduate preferred. Salary $125.00 to start. Cornell Wood Products Co., Cornell, Wisconsin. A-18

WANTED—Resident salesmen in several states, capable of representing a well established manufacturer of grocery bags, special bags, sacks, toilet paper, wrapping papers plain or printed, and other allied lines. Applicant should have car and be familiar with the jobbing trade in his territory. State full particulars in first letter. Address, Box 29-206, care Paper Trade Journal. A-18

NIGHT SUPERINTENDENT—Two machine mill, five nights per week. Making fine papers. Monadnock Paper Mills, Bennington, New Hampshire. A-18

WANTED—A young Protesant machine tender desiring advancement as assistant superintendent with experience in making bonds and ledgers. Mill located in Massachusetts. In applying state age and previous experience. Address, Box 29-249, care Paper Trade Journal. A-25

PRINTER—Experienced man to take charge of printing department in factory manufacturing sacks for flour, feed, etc. Give full particulars as to experience, age and salary in first letter. Address, Box 29-199, care Paper Trade Journal. A-18

SITUATIONS WANTED

PAPER SALESMAN—Energetic salesman, sold wood pulp successfully over 20 years, desires change to paper, commencing with moderate remuneration. Best references. Address, Box 29-251, care Paper Trade Journal. M-2

POSITION WANTED AS PLANT ENGINEER in charge of power and maintenance. Graduate engineer with fifteen years experience. Now in Wisconsin. Address, Box 29-17, care Paper Trade Journal. t.f.

SITUATIONS WANTED

SUPERINTENDENT

Young high grade executive desires new connection. Knows latest manufacturing methods and equipment, can get results on Yankee machines. Has excellent business training. Best of reference. Address, Box 29-252, care Paper Trade Journal. A-25

MACHINE TENDER OR ASSISTANT SUPERINTENDENT—Eighteen years experience on cylinder machines making tissues and crepes. Thirty-five years of age, married. Health good; ready to go anywhere. Address, Box 29-203, care Paper Trade Journal. A-18

BOOK PAPER SALESMAN—Ten years mill and jobbing experience with thorough knowledge of book and printing papers, trade customs, etc., and a producer. Willing to travel and desires to secure position of responsibility; seeking opportunity preferably with mill or progressive jobber desiring efficient representation. American, good health and personality. Highest credentials. Address, Box 29-250, care Paper Trade Journal. A-25

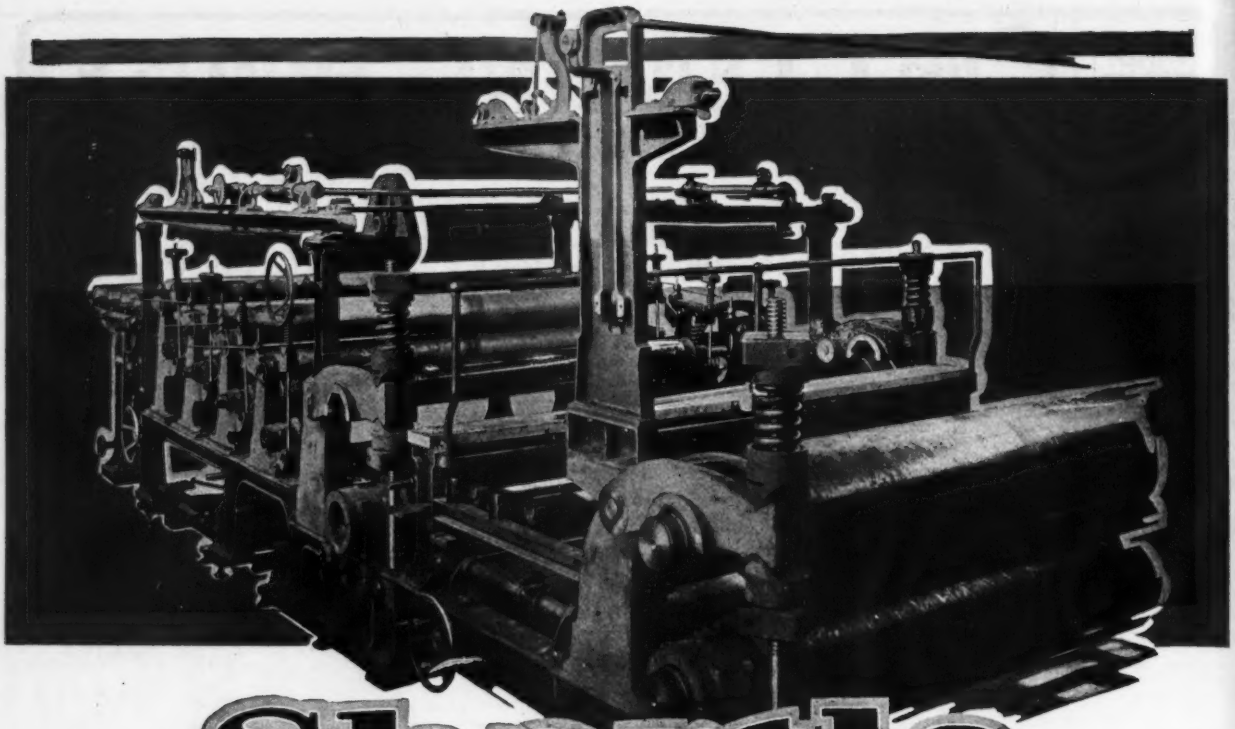
SUPERINTENDENT—Eighteen years practical experience tissues, plain and creped, towels, napkins, all lines of creped paper products. Kraft and specialties; twisting, cable filling. Experienced converter crepes and waxing. References. Address, Box 29-22, care Paper Trade Journal. A-25

SUPERINTENDENT—28 years practical paper maker, desires change. Making bond, writing, book, fibers, manilas, news and Kraft. Address, Box 28-896, care Paper Trade Journal. t.f.

SUPERINTENDENT—Open for position running mill making book, bonds, writing, envelope and hi-bulk papers. A real live wire with best references. Address, Box 29-244, care Paper Trade Journal. A-18

CHEMICAL ENGINEER—Seven years' experience in paper and sulphite mill control, also color supervision and chemical and physical testing; desires position as technical director. Address, Box 29-245, care Paper Trade Journal. A-18

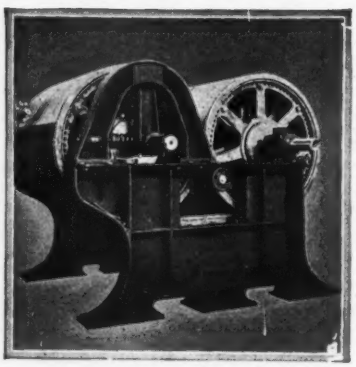
ASSISTANT SULPHITE SUPERINTENDENT desires similar position. Nine years practical experience, some technical training. Expert on cooking and acid making. Now employed. Age 32. References. Address, Box 29-190, care Paper Trade Journal. A-18



Shartle
Insulating Board Forming Machine

It is a lean month when Shartle doesn't announce a new piece of paper mill equipment or some improvement on old equipment.

This time it is a new type of machinery for forming insulating wall board.



This machine is like the one in use at the Stewart Insoboard Company, St. Joseph, Mo.

Detailed information upon request.

Shartle Brothers Machine Co.
Middletown, Ohio

Div. The Black-Clawson Co., Hamilton, Ohio

Export Offices: **15 Park Row, New York City**

SHARTLE
DIVISION OF BLACK-CLAWSON

SITUATIONS WANTED

GROUND WOOD SUPERINTENDENT—Now employed, desires change. 18 years' experience in United States and Canada on Pocket and Magazine Grinders. Experienced in erection and maintenance. Age 38. Long experience on news pulp. References from past and present employers. Address, Box 29-114, care Paper Trade Journal. M-2

BOSS BEATERMAN, beater engineer or color man. 18 years experience on most all grades. Married; steady. Address, Box 29-143, care Paper Trade Journal. A-18

SUPERINTENDENT WANTS POSITION—25 years practical experience, 17 years as superintendent on all grades of folding box and container board. Have successful record for quality and production. Can furnish good references. Address, Box 29-236, care Paper Trade Journal. t. f.

COATING MILL SUPERINTENDENT desires position. 25 years experience on all grades of coated papers. Will guarantee production and lowest cost. A-1 on repairs and construction. Address, Box 29-173, care Paper Trade Journal. A-25

MACHINE TENDER wishes to make a change. Have been running machine for the past 13 years on all types of board. Good on test and can keep up machine repairs. Married, sober and steady. 35 years old. Address, Box 29-242, care Paper Trade Journal. A-25

SUPERINTENDENT—Wants new connection. Years' experience on bond, ledger, writing, book and high grade tissues. Guarantees production and lowest cost. A-1 on repairs and construction. Excellent references. Address, Box 29-243, care Paper Trade Journal. M-2

SUPERINTENDENT—Very successful with maintenance and organization problems and production results. A thorough practical experience in rope and Kraft papers, also various specialties using papers, Kraft and sulphite pulp, rope and rags for stock. Both Cylinder and Fourdrinier machines. Well educated. Address, Box 29-214, care Paper Trade Journal. A-25

CHEMIST—Recent graduate. Two years' experience in paper and board mills. Open for position as chemist or assistant. Address, Box 29-216, care Paper Trade Journal. A-25

PACIFIC COAST AGENCY for paper manufacturers sought by man now located in Los Angeles. Many years experience in New York City. Good references. Address, Box 29-155, care Paper Trade Journal. t. f.

PAPERMAKER of thoroughgoing experience, now employed, seeks new connection. Able to correspond in Spanish, English and Norwegian languages. Address, Box 29-227, care Paper Trade Journal. A-25

ENGINEER—Desires position of responsibility. Has successfully held positions as resident engineer and chief engineer with large paper company. Varied experience in United States and Canada. Has been successful in reducing costs. Address, Box 29-246, care Paper Trade Journal. M-2

MASTER MECHANIC of large experience wishes to make a change. A-1 mechanic. Capable of handling a large job. Good steam and boiler man. Can rebuild beaters to high speed. Address, Box 29-229, care Paper Trade Journal. A-25

EXECUTIVE SALESMAN—Successful record of 12 years selling to large consumers and jobbers, present employed, seeking new mill connection for Metropolitan and surrounding territory. Wrapping and allied papers. Address, Box, 29-231, care Paper Trade Journal. A-18

SULPHITE SUPERINTENDENT—About 10 years practical experience as superintendent in mills making high grade bleached and unbleached pulp; also in charge of laboratory, power and maintenance. Technical graduate. Very young. At present employed and in good standing. Well versed in paper making and in technical control. I am looking for a good connection with a reliable concern. Address, Box 29-235, care Paper Trade Journal. A-25

SITUATIONS WANTED

EXECUTIVE - SECRETARY - STENOGRAPHER: Young woman, Christian, wishes to act as New York representative of paper mill or as assistant to representative. Thoroughly competent. Several years experience wholesale paper business. Now employed. Write for interview. Address, Box 29-228, care Paper Trade Journal. M-2

PLANT ENGINEER—Experienced plant engineer desires position. American, age 48, married. Thoroughly familiar with paper machine, also steam, electrical and the general maintenance of plant. Address 17 Snell St., Montello, Mass. A-18

FOR SALE

FOR SALE—One slightly used Noble & Wood Mammoth Jordan together with 500 HP. motor and coupling. It is also equipped with pulley or belt drive, if preferred. Price and particulars upon request. The Noble & Wood Machine Co., Hoosick Falls, N. Y. tf.

FOR SALE—Headquarters—Good Used Paper Machinery. Pulper Mixers, Wet Machines, Fourdriniers, Super-Calenders, Dryers, Cylinder Moulds, Coating Machines, Evaporators, Sulphur Burners, Tube and Rod Mills, Barkers, Beaters, Digesters, Grinders, Slitters, Shredders, Rotary, Flat and Pulp Screens, Save-Alls, etc. CONSOLIDATED PRODUCTS CO., INC., 15-18 PARK ROW, NEW YORK CITY. BARCLAY 0603 S-12

USED JORDANS—7 Large Jordans, some belt driven and some direct connected to motors, including motors and starters; all in good condition and at extremely low prices. If interested, write us quickly, describing your requirements. THE NOBLE & WOOD MACHINE CO., Hoosick Falls, N. Y. t.f.

PAPER COATING MACHINERY—Waxing, Oiling, Gumming, Glueing, Asphalt Duplexing, Laboratory Testing Machines. High Speed, new improvement. MAYER COATING MACHINES CO., Inc., Rochester, N. Y. t.f.

FOR SALE—Two Langston Winders 82" and 126" width. Good condition. Will consider any reasonable offer. Address, Box 29-221, care Paper Trade Journal. M-2

FOR SALE—700 ft. Shafting 2-15/16" to 5-15/16" with couplings and boxes. Write us for price. Worcester Lumber Co., Ltd., Chassell, Michigan. M-2

FOR SALE—Poole Speed Transformer, type "H"-13, double Helical Herringbone Gears and Casing complete with coupling; used three weeks; ratio 6.8 to One—Driving shaft 4", Delivery shaft 2¾"; Floor space 39 x 44½" overall. Guaranteed A-1 mechanical condition. W. R. Jennison, Bisbee Building, Jacksonville, Fla. A-18

LIST YOUR WANTS HERE

Classified Advertising Placed Here Brings Results

FOR SALE

62 Dryers 48" diameter x 160" face, with 6 Felt Dryers 36 x 160".

We can furnish new Cylinder or Fourdrinier parts for these dryers to make a complete and modern machine to suit your requirements.

The Shartle Brothers Machine Co.
Middletown, Ohio tf.

FOR SALE

HEAVY WIDE USED BELTING

83'—30" Triple Leather
81'—26" Triple Leather
66'—24" Triple Leather
36'—18" Double Leather
39'—18" Double Leather
37'—18" Double Leather
34'—18" Double Leather
20'—16" Double Leather
24'—16" Double Leather
53'—16" Double Leather (New)
53'—15" Double Leather
35'—15" Double Leather

Write us for prices.
Worcester Lumber Co., Ltd.,
Chassell, Michigan, A-18

FOR SALE

30" Kidder Model S. L. Slitter
30" Lever Table Cutter

Apply to

Arthur S. Zabriskie, Inc.,
290 BROADWAY
NEW YORK, N. Y. t.f.

PAPER MILL MACHINERY

Moore & White four drum winders with slitter attachment in good operating condition.
One 158" with drums 12" diameter.
One 130" with drums 12" diameter.
One 112" with drums 10" diameter.
One 83" with drums 10" diameter.
Warren winders, two drums with slitters.
One 154". One 127".
Beloit winders.
One 149" two drum
One 134" two drum.
One 90" two drum.
One Brownell Twin Variable Speed Engine 14 x 16".

For Sale By
FRANK H. DAVIS COMPANY
175 Richdale Avenue Cambridge, Mass.

BANKRUPT SALE

LINCOLN PAPER MILLS, ELKHART, INDIANA

3 PAPER MACHINES with necessary equipment
1—90" Trim
1—80" Trim
1—70" Trim
REAL ESTATE situated on St. Joseph River.
Over 100,000 sq. ft. of floor space.
Served by three switches.

INVENTORY OF RAW MATERIALS such as bleached and unbleached sulphite, bleached soda pulp, manila cuttings, alum, clay, etc.

FINISHED MATERIAL consisting of various kinds of paper in rolls and sheets and in various sizes.

Anyone wishing further information may secure a copy of the inventory by writing to the St. Joseph Valley Bank, Trustee in Bankruptcy, Elkhart, Indiana.

SALE TO BE HELD AT THE MILL, ELKHART, INDIANA,
1:00 P.M., TUESDAY, APRIL 23, 1929

A-18

WANTED

WANTED—Odd lots, rejected or cull rolls of paper. W. A. Johns Paper Co., 526 W. 18th St., Chicago. t.f.

LANGSTON Slitters and Re-winders, 50 to 85" width. Address, Box 29-247, care Paper Trade Journal. A-18

WANTED—2 W. & P. Pulpers, 2 Filter Presses and 1 Rogers Wet Machine. Address, Box 27-285, care Paper Trade Journal. tf.

GUMMING EQUIPMENT—Must be complete. Give make of machine, width and full particulars. Address, Box 29-144, care Paper Trade Journal. t.f.

WANTED—2 Calender Rolls about 12" x 52", equipped for passage of steam. Address, Box 29-217, care Paper Trade Journal. A-18

WANTED—One used Experimental Cylinder Paper Machine complete. Must be in good condition. Address, Box 29-218, care Paper Trade Journal. A-18

WANTED—Complete gumming outfit to manufacture gum paper. Address, Box 29-219, care Paper Trade Journal. A-25

WANTED—A processing machine to process gum stock to make it lay flat. Address, Box 29-220, care Paper Trade Journal. A-25

WANTED TO LEASE—Three to five cylinder one machine mill. Located in New England or Middle Atlantic States. Trim 40 to 65". Give detailed description including rotaries, beaters, dryers and calenders. Address, Box 29-253, care Paper Trade Journal. A-18

WANTED—Small Fourdrinier paper machine with single or multiple dryers; also beater equipment, machine to trim 24 to 36 inches. Address, Box 29-248, care Paper Trade Journal. M-2

MISCELLANEOUS

WHAT HAVE YOU to offer in Lots, Mill Ends, Rejected, Damaged, or Cull Rolls of Paper? We deal only in such items and are in a position to buy any quantity on a cash basis Goldman Paper and Paper Stock Co., 414-416 So Front Street, Philadelphia, Pa. tf

WANTED—Side or odd lot rolls ten to ninety pound basis The larger the quantity the better we like it. Address. Box 27-481, care Paper Trade Journal. t.f

CLARK MANUFACTURING COMPANY, Holyoke. Mass Telephone 1828. Builders of cylinder moulds, couch and felt rolls, dandy rolls We cover dandies and cylinders tight, for fast running machines. tf

HELP WANTED

WANTED—First-class machine tender, experienced on Yankee machine on light weight paper. Eight hour shifts. State experience and give references. Address, Box 29-256, care Paper Trade Journal. A-25

Many Times Some Little Classified Advertisement Placed in These Columns Brings Very Satisfactory Results

OPPORTUNITY

Anyone want to start in the Bag Business in New York City with new machines?

CASH, TERMS, OR ROYALTY BASIS

There is always room for one more.

Lockport Machine Co.

LOCKPORT, N. Y.

HELP WANTED

TRIMMER OPERATORS—All round paper finishers. Location mill large city. Address, Box 29-257, care Paper Trade Journal. A-18

ADJUSTER—On flat and square paper bag machines. Lockport and Apex printing attachments. Must be able to make own repairs. Address, Box 29-255, care Paper Trade Journal. M-2

SALES ENGINEER FOR NORWAY WANTED—An engineer with experience in the manufacture of paper as well as chemical pulp, and preferably also groundwood. Wanted as travelling representative by Eureka Mekaniska Verksted and G. Hartmann of Oslo. Should be able to speak the English and German as well as one of the Scandinavian languages. Apply to W. Waal, 413 Drummond Building, Montreal, P. Q., Canada. A-18

FOR SALE

FOR SALE—One Steel Economy Motor Power Baler, No. 145; used less than one year. Address inquiry to The Maxwell Paper Company, Franklin, Ohio, Warren County. A-18

SITUATIONS WANTED

EXECUTIVE-SALESMAN: 14 years successful record in the management, manufacture, sales of paper products and specialty business, seeks connection with progressive manufacturer interested in the development and sales of new products. Have active trade. Can produce at once. Address, Box 29-254, care Paper Trade Journal. A-18

Classified Advertising costs little but brings large returns.

LOCKWOOD'S DIRECTORY

of the PAPER and ALLIED TRADES

1929 Edition
The 54th Consecutive Annual Issue
Corrected Up-to-Date
PRICE $7.50

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Entire contents classified under separate headings for the United States and Canada, alphabetically and geographically arranged by states.

City Addresses of Mills and Mill supply Houses
Classified List of Paper Mill Products
Classified List of Pulp Mill Products
Coated Paper Manufacturers
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Idle Mills
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Paper Merchants
Paper Stock and Rag Dealers
Paper Bag Manufacturers
Paper Box Manufacturers
Paper Wood Pulp and Chemical Fiber Mills of the United States, Canada, Cuba, Mexico and South America.
Paper Specialties Manufacturers
Papeterie Manufactures
Etc., etc., etc.

LOCKWOOD TRADE JOURNAL CO. 10 East 39th Street - Newyork, N.Y., U.S.A.

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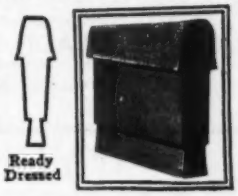
Manitowoc Eng. Works.
Moore & White Co.

"READY DRESSED" MILL COGS

LABOR SAVING—TIME SAVING

THE MOST ECONOMICAL FILLING THAT CAN BE PUT IN A MORTISE WHEEL



Ready Dressed

Blank Head

WE MAKE ANY STYLE OR SIZE WANTED

WRITE FOR INSTRUCTION SHEET "C" WHICH IS FREE

QUICK SERVICE ON ALL SIZES

THE N. P. BOWSHER CO., So. Bend, Ind.

Paper Stock

Supplies for Paper Manufacturers

A reliable source of supply.

Established for 43 years.

Write us your needs

Mendelson Bros. Paper Stock Co.

910 S. Michigan Ave. Chicago, Ill.

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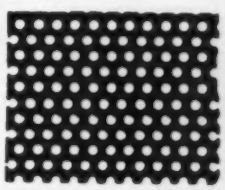
Perforated Metal Screens

For Pulp and Paper Mills

STEEL, COPPER, BRASS, BRONZE, MONEL METAL and other Alloys punched for Centrifugal and Rotary Screens, Pulp Washers, Drainer Bottoms, Filter Plates, etc.



".065" Round

CHARLES MUNDT & SONS

63-65 FAIRMONT AVE. JERSEY CITY, N. J.

STANDARD-FLANGED-WOOD PIPE

Note: Flange Fits Flush. No Metal on Inside.

Changing the Piping of an entire Industry

It is true that Michigan Wood Pipe with Collar Flanges as illustrated is revolutionizing the Paper Mill Industry. Up to date Paper Mills are making the change as rapidly as possible. Some are changing entire Plant piping at once while others are changing line by line in order that production will not be held up.

The advantages are long life, no discoloration, power saving, larger capacity, light weight, easy to install, easy to take apart without damage, and cheaper.

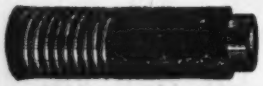
Michigan Pipe Company, Bay City, Michigan

Perforated Metal Screens
for every purpose

also elevator buckets of all kinds; chutes; hoppers stacks and tanks.

MITCO Products — Interlocked Steel Grating; Shur-Site Stair Treads; Armorgrids.

HENDRICK MANUFACTURING CO.
50 Dundaff St., Carbondale, Pa.
New York: 30 Church St. Pittsburgh: Union Trust Bldg.



WYCKOFF WOOD PIPE

The Paper Industry is successfully using thousands of feet of this Pipe and they find it to be the best conveyance for White Water, Paper Stock and Acids that can be obtained

Pressure Pipe That Never Bursts.
Built in sizes 1 inch to 48 inches.

A. Wyckoff & Son Company
1855 Elmira, N. Y., U. S. A. 1928

Appleton
Felts and Jackets

JOHN WALDRON CORPORATION
Paper Converting Machinery Builders Since 1827
Main Office and Works—NEW BRUNSWICK, N. J.
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A more uniform stock refinement with less power consumption per ton of stock prepared is possible with the BALL BEARING TYPE APPLETON JORDAN
WRITE TODAY FOR BOOKLET - 5 POINTS OF IMPROVED JORDAN PERFORMANCE
THE APPLETON MACHINE COMPANY - APPLETON, WIS.

Your Card in This

Space Will Bring

Results

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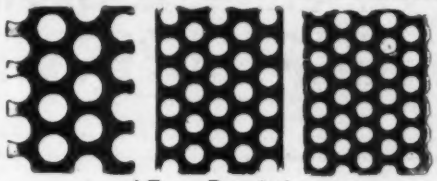

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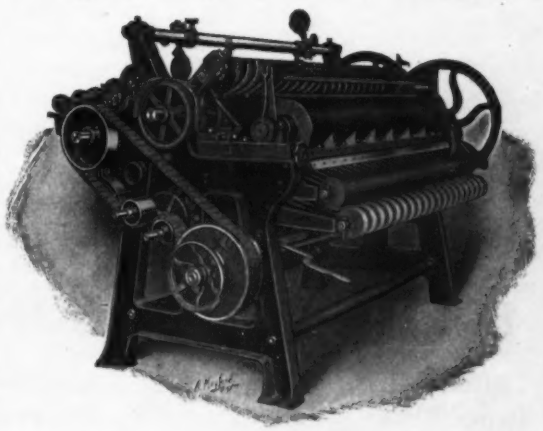

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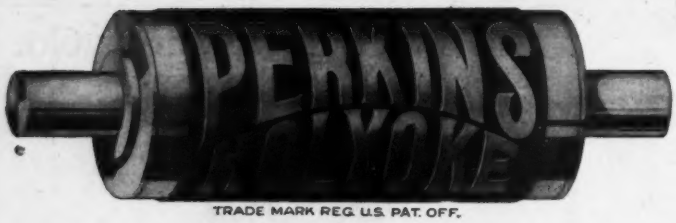

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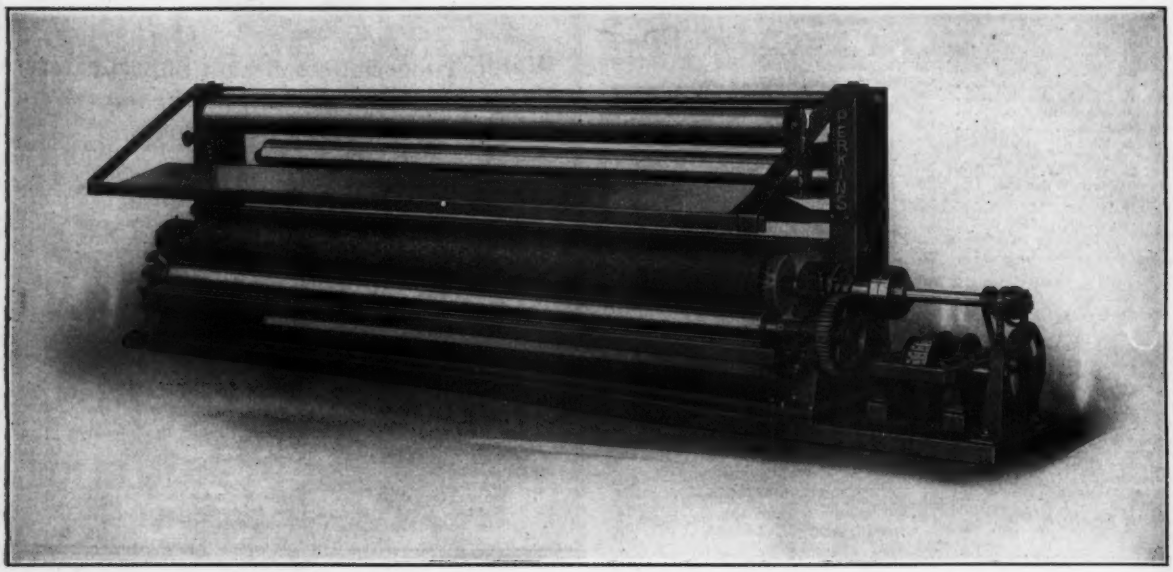

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The Perkins machine has the necessary guide rolls and all parts of the unit are mounted on a common bed plate.

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Stock Cutters
Paper Dampeners
Bleach Ejectors

"NO CALENDER CAN BE BETTER THAN THE ROLLS IN IT"

New York Market Review

Office of the Paper Trade Journal,
Wednesday, April 17, 1929.

Most of the business transacted in the local paper market during the past week was along routine lines. Demand for the various grades was seasonal and prices generaly remained steady and unaltered. Inquiries for future business are fairly numerous for the time of the year. Reports from the sales forces of the leading paper organizations are generally optimistic.

With newspaper advertising and circulation well ahead of last year at this date, the outlook for the news print market is more promising. Statistics compiled by the News Print Service Bureau show that production in the United States and Canada during the past week was maintained at 82 per cent of total capacity. Shipments averaged 86 per cent of rating.

Both production and business declined slightly in the paper board market. The price situation continues unsatisfactory. Some improvement was noticed in the fine paper market. Tissues are moving rather slowly. No radical changes were recorded in the coarse paper market. Wrapping paper is going forward in fair volume. Prices are geneally holding to schedule.

Mechanical Pulp

Steadiness prevails in the ground wood market. Offerings of both domestic and imported mechanical pulp are rather limited at present. Demand for the various grades is persistent and prices are steady to firm. Production has been curtailed somewhat of late and there is little talk of concessions around.

Chemical Pulp

The position of the chemical pulp market is practically unchanged. Demand for both imported and domestic grades was moderately active during the past week. Bleached sulphite continues exceptionally firm and kraft is steadier. Prices are generally being maintained at previously quoted levels, without difficulty, and shading is infrequent.

Old Rope and Bagging

Demand for old rope is heavy and prices continue to rise. Foreign manila rope is now quoted at from 4.40 to 4.65, while domestic manila rope is selling at from 4.75 to 5.00. Mixed strings are moving in good volume. The bagging market is becoming more active. Gunny scrap and scrap bagging are in better request and roofing bagging is also moving freely.

Rags

The paper mills are displaying more interest in the domestic rag market. Shirt cuttings are in excellent demand and prices are firmer. Washables are now quoted at from 4.75 to 5.25; Fancy at from 5.75 to 6.25, and Blue Overalls at from 7.50 to 8.00. The foreign rag market is also showing signs of improvement, and prices of the various grades are steadier.

Waste Paper

Conditions in the paper stock market were rather quiet during the past week. Demand from the board mills for the lower grades has fallen off slightly and quotations are somewhat easier. Book stock continues fairly steady and ledger stock is still moving in satisfactory volume. Sodt white shavings are showing signs of increased activity of late.

Twine

Trading in the twine market was fairly satisfactory during the past week. Demand for the various grades was well up to average for the season, influenced in some extent by the movement of wrapping paper, which is said to be proceeding at a normal pace. Prices are being maintained at the levels which have prevailed for some time past.

William Howard Dead

William Howard, a well known paper maker, died suddenly on March 31 at Fulton, N. Y., where he was visiting friends. He is survived by one son, Edwin Howard, of Yonkers, with whom he made his home since retiring from active business; one grand daughter, a sister, and one brother. Mr. Howard's wife died about a year ago. The body was taken to Turners Falls, Mass., for interment in the family lot.

Mr. Howard was 84 years old, and retired about eight years ago. Born in Devonshire, England, he learned his trade of paper making there, and worked in some of the largest mills in England and Scotland. Coming to this country he had worked in many states, also in Canada, where he was superintendent of the J. C. Wilson Company, for a number of years. He was also superintendent of the Victoria Paper Mills, at Fulton, N. Y., at two different times. Ever alert for improvement, he progressed with the times, and his knowledge of the manufacture of all kinds of paper left nothing to be desired. He was one of the six Howard brothers, all expert and noted paper makers, who in their day were second to none. Of this splendid group of paper makers, but one now remains, James Howard, of Hamilton, Ohio.

Many relatives and old time associates of Mr. Howard attended the services held at St. Andrew's Episcopal Church in Turners Falls, Mass., on April 2.

Slight Change in Swedish Pulp Prices

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., April 3, 1929.—Chemical pulp prices as quoted on the Swedish market underwent some changes during the second half of February, bleached sulphite being quoted on March 1 at $3.22 to $3.52, easy bleaching sulphite at $2.32 to $2.49, strong sulphite at $2.15 to $2.25 and strong sulphate at $2.07 to $2.19, all quotations per 100 pounds f.o.b. Swedish ports. Quotations on ground wood at the same time were approximately $10 to $11 per short ton for wet pulp and $24 to $27 for dry pulp. No changes were reported in prices quoted on news print, greaseproof, and wrapping papers.

Morgan L. Ellis Co. Broadens Field

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., April 15, 1929.—The Morgan L. Ellis Company, 301 Congress street, is broadening its field and handling paper specialties, such as paper napkins, drinking cups and other articles. Among the customers or prospective customers, are hospitals and other institutions. Earl R. Johnson, formerly sales manager of the Globe Paper Company, Inc., 110 Fulton street, has become vice president of the Morgan L. Ellis Company, and is in charge of the paper specialty department.

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BELLE ALKALI COMPANY, BELLE, W. VA.

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Cylinders—Ton Tanks—Tank Cars

76%—Solid Liquid Flake

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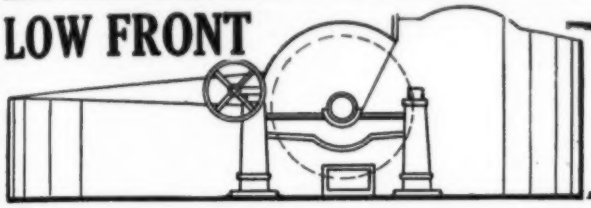

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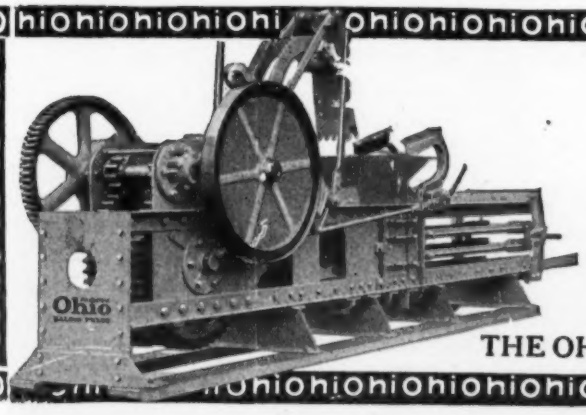

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Office of the PAPER TRADE JOURNAL,
Wednesday, April 17, 1929.

BLANC FIXE.—The blanc fixe market is practically unchanged. Demand for both the pulp and the powder is mostly routine. Prices are steady. The pulp is quoted at from $42.50 to $45.00 per ton, while the powder is selling at from 3¾ cents to 4½ cents per pound, in barrels, at works.

BLEACHING POWDER.—No radical changes were recorded in the bleaching powder market. Shipments against contract are moving in satisfactory volume. Prices are generally holding to schedule. Bleaching powder is still selling at from $2.00 to $2.35 per 100 pounds, in large drums, at works.

CASEIN.—Steadiness continues to prevail in the casein market. Domestic casein is still quoted at from 16 cents to 16¼ cents per pound, while standard ground imported is selling at 16 cents per pound and finely ground at 16¼ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Demand for caustic soda is persistent. Prices are generally holding to previously recorded levels. Solid caustic soda is quoted at from $2.90 to $2.95, while the flake and the ground are still selling at from $3.30 to $3.35 per 100 pounds, in large drums, at works.

CHINA CLAY.—While the china clay market was rather quiet during the past week prices were maintained at previous levels. Imported china clay is quoted at from $15 to $25 per ton, ship side, while domestic paper making clay is selling at from $8 to $13 per ton, at mine.

CHLORINE.—The chlorine market is exhibiting a strong undertone. Supplies are moving into consumption in good volume. Prices are steady. Chlorine is quoted at 3 cents per pound, in tanks, or multi-unit cars, at works, on standard contracts. The spot quotation ranges from 3¼ to 3½ cents per pound.

ROSIN.—Demand for rosin was light. At the naval stores, the grades of gum rosin used in the paper mills are quoted at from $8.10 to $8.50 per 280 pounds, ex dock, in barrels. Wood rosin is selling at from $6.60 to $7.40 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Conditions in the salt cake market are exceptionally firm. Demand from the paper mills is persistent and offerings are decidedly scarce. Salt cake is still quoted at from $16 to $18 per ton, while chrome salt cake is selling at from $14 to $15 per ton, in bulk, at works.

SODA ASH.—The soda ash market is in a sound position. Shipments of this product are proceeding at a steady pace. Prices are holding to schedule without difficulty. Contract quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bags, $1.32½; and in barrels, $1.55.

STARCH.—Trading in the starch market was moderately active during the past week. Withdrawals against contract are well up to average. Prices remain unchanged. Special paper making starch is quoted at $3.82 per 100 pounds, in bags, and at $3.99 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Supplies of sulphate of alumina are moving into consumption in good volume. Demand is excellent and prices are steady to firm. Commercial grades of sulphate of alumina are quoted at from $1.40 to $1.55 and iron free at from $1.95 to $2.05 per 100 pounds, in bags, at works.

SULPHUR.—Business in the sulphur market is satisfactory for the season. Sulphur is still quoted at $18 per ton, in lots of 1,000 tons or over, on yearly contracts, and at $20 per ton for any smaller quantity over that period. On spot and nearby car loads, the quotation is $21 per ton.

TALC.—During the past week trading in the talc market was fairly active. Prices are generally being maintained at previously quoted levels. Domestic talc is quoted at from $16 to $18 per ton, at eastern mines, while imported talc is selling at from $18 to $20 per ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	11.00 @38.00
Bonds	9.00 @45.00
Writings—	
Extra Superfine	14.00 @32.00
Superfine	14.00 @32.00
Tub sized	10.00 @15.00
Engine sized	8.00 @11.00
Book, Cased—	
S. & S. C.	6.00 @ 7.50
M. F.	5.75 @ 7.00
Coated and Enamel	7.50 @12.00
Lithograph	7.50 @12.00
Tissues—Per Ream—	
White No. 1	.75 @ 1.00
Anti-Tarnish	1.35 @ 1.90
Colored	1.00 @ 2.00
White No. 2	.75 @ .80
Kraft	1.00 @ 1.10
Manila	.75 @ .80
Kraft—	
No. 1 Domestic	6.25 @ 6.50
No. 2 Domestic	5.25 @ 5.50
Southern	4.25 @ 4.50
Imported	6.50 @ 7.00
Manila—	
No. 1 Jute	9.00 @ 9.25
No. 2 Jute	7.75 @ 8.50
No. 1 Wood	4.75 @ 5.25
No. 2 Wood	4.00 @ 4.50
Butchers	3.75 @ 4.25
Fibre Papers—	
No. 1 Fibre	5.00 @ 5.50
No. 2 Fibre	4.75 @ 5.25
Common Bogus	2.75 @ 3.00
Screenings	3.00 @ 3.25
Card Middles	4.00 @ 5.00
Glassine—	
Bleached, basis 25 lbs	13.00 @16.00
Bleached, basis 20 lbs.	15.00 @16.00

(Delivered New York)

News, per ton—	
Rolls, contract	62.00 @ —
Rolls, spot	62.00 @ —
Sheets	67.00 @ —
Side Runs	47.00 @52.00
Boards—per ton—	
News	35.00 @42.50
Straw	52.50 @55.00
Chip	32.50 @40.00
Binders' Boards	65.00 @67.50
Sgl. Mla. Ll. Chip	45.00 @47.50
Wood Pulp	80.00 @85.00
Container	52.50 @55.00
85 Test Jute Liner	50.00 @52.50

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—	
Moist	28.00 @31.25
Dry	32.00 @34.00

(F. o. b. Mill)

No. 1 Domestic	26.00 @29.00
Screenings	15.00 @20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—	
Bleached	3.75 @ 4.40
Easy Bleaching	2.90 @ 3.10
No. 1 strong unbleached	2.60 @ 2.80
Mitscherlich unbleached	2.60 @ 3.25
No. 2 strong unbleached	2.40 @ 2.50
No. 1 Kraft	2.40 @ 2.75
No. 2 Kraft	2.35 @ 2.50
Sulphate—	
Bleached	375 @ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—	
Bleached	3.40 @ 4.75
Easy Bleaching Sulphite	2.60 @ 2.75
News Sulphite	2.40 @ 2.50
Mitscherlich	3.00 @ 3.25
Kraft (Domestic)	2.50 @ 3.30
Soda Bleached	3.25 @ 3.40
Sulphate Screenings—	
Coarse	.75 @ .95
Refined	1.65 @ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—	
New White, No. 1	11.00 @11.50
New White, No. 2	8.00 @ 8.50
Silesias No. 1	7.50 @ 8.00
New Unbleached	11.00 @11.50
Washables	4.75 @ 5.25
Fancy	5.75 @ 6.25
Blue Overall	7.50 @ 8.00
New Blue Prints	5.25 @ 5.50
New Soft Blacks	5.25 @ 5.75
Mixed Khaki Cuttings	4.75 @ 5.25
Pink Corset Cuttings	8.00 @ 8.50
O. D. Khaki Cuttings	5.15 @ 5.75
Men's Corduroy	3.75 @ 4.25
New Mixed Blacks	3.50 @ 3.75

Old Rags

White, No. 1—	
Repacked	5.50 @ 6.00
Miscellaneous	4.50 @ 5.00
White, No. 2—	
Repacked	3.00 @ 3.50
Miscellaneous	2.50 @ 2.75
St. Soiled, White	2.00 @ 2.15
Thirds and Blues—	
Repacked	2.25 @ 2.50
Miscellaneous	1.75 @ 2.00
Black Stockings	3.25 @ 3.75
Roofing Rags—	
Cloth Strippings	1.70 @ 1.80
No. 1	1.70 @ 1.80
No. 2	1.55 @ 1.65
No. 3	1.30 @ 1.40
No. 4	1.25 @ 1.35
No. 5A	.90 @ 1.05

Foreign Rags

New Rags

New Dark Cuttings	2.50 @ 3.00
New Mixed Cuttings	2.75 @ 3.25
New Light Silesias	7.00 @ 7.50
Light Flannelettes	7.50 @ 8.00
Unbleached Cuttings	10.00 @11.00
New White Cuttings	10.50 @11.50
New Light Oxfords	7.00 @ 7.50
New Light Prints	5.50 @ 6.50

Old Rags

No. 1 White Linens	7.50 @ 8.25
No. 2 White Linens	5.75 @ 6.75
No. 3 White Linens	4.75 @ 5.25
No. 4 White Linens	3.00 @ 3.50
No. 1 White Cotton	5.50 @ 6.50
No. 2 White Cotton	4.50 @ 5.50
No. 3 White Cotton	3.00 @ 4.00
No. 4 White Cotton	1.90 @ 2.15
Extra Light Prints	2.75 @ 3.25
Ord. Light Prints	2.25 @ 2.50
Med Light Prints	1.90 @ 2.10
Dutch Blue Cottons	2.20 @ 2.40
French Blue Linens	2.75 @ 2.85
German Blue Linens	2.35 @ 2.55
German Blue Cottons	2.15 @ 2.25
Checks and Blues	1.85 @ 2.00
Lindsay Garments	1.90 @ 2.00
Dark Cottons	1.65 @ 1.70
Old Shopperies	1.55 @ 1.60
New Shopperies	1.50 @ 1.60
French Blues	2.10 @ 2.25

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—	
Foreign	1.65 @ 1.75
Domestic	1.70 @ 1.75
Wool Tares, light	1.60 @ 1.65
Wool Tares, Heavy	1.65 @ 1.75
Bright Bagging	1.65 @ 1.70
Small Mixed Rope	1.25 @ 1.40
Manila Rope—	
Foreign	4.40 @ 4.65
Domestic	4.75 @ 5.00
New Burlap Cut	2.75 @ 3.00
Hessian Jute Threads—	
Foreign	3.50 @ 4.00
Domestic	3.25 @ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—	
Hard, white, No. 1	3.25 @ 3.50
Hard, white, No. 2	2.40 @ 2.55
Soft, White, No. 1	2.50 @ 2.60
White envelope cuttings	3.25 @ 3.50
Flat Stock—	
Stitchless	1.60 @ 1.70
Overissue Mag	1.60 @ 1.70
Solid Flat Book	1.50 @ 1.60
Crumpled No. 1	1.15 @ 1.25
Solid Book Ledger	2.00 @ 2.10
Ledger Stock	1.70 @ 1.80
New B. B. Chips	.65 @ .75
New Env. Cut	2.40 @ 2.60
Manilas—	
New Cuttings	1.60 @ 1.85
Extra No. 1 old	1.25 @ 1.35
Print	.75 @ .80
Container	.60 @ .65
Bogus Wrapper	.75 @ .85
Old Kraft Machine Compressed bales	1.70 @ 1.80
News—	
No. 1 White News	1.65 @ 1.75
Strictly Overissue	.75 @ .80
Strictly Folded	.58 @ .63
No. 1 Mixed Paper	.45 @ .50
Common Paper	.30 @ .35

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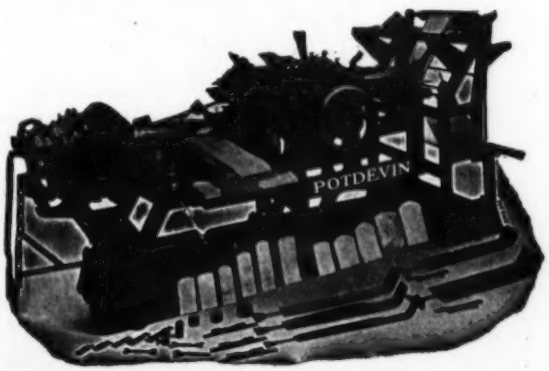

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Twines
(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.46
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.19	@	.21
No. 2	.18	@	.20
Tube Rope—			
4-ply and larger	.16	@	.17
Fine Tube Yarn—			
5-ply and larger	.21	@	.25
4-ply	.25	@	.29
3-ply	.28	@	.32
Unnnished India—			
Basis	.13	@	.14
Paper Makers Twine Balls	.11	@	.12
Box Twine, 2-3 ply	.15	@	.17
Jute Rope	.17	@	.19
Amer. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.16	@	.18
No. 2 Basis	.14	@	.16
Sisal Lath Yarn—			
No. 1	.14	@	.16
No. 2	.12	@	.14
Manila Rope	.22	@	.24

CHICAGO

Paper
(F. o. b. Mill)

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.34
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¾
No. 2 M. F. Book	.05¾	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.06¼	@	.06½
Southern Kraft	.03¾	@	.04
No. 2 Kraft	.04	@	.04¼
Wood Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¼	@	.07½
(Delivered Central Territory)			
News, per ton—			
Rolls, contract	62.00	@	—
Sheets	67.00	@	—
Boards, per ton—			
Plain Chip	37.50	@	41.00
Solid News	47.50	@	—
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined—			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.20	@	2.25
White Env. Cuttings	2.40	@	2.50
No. 1 Soft Shavings	2.00	@	2.10
No. 1 Mixed	.90	@	1.00
No. 2 Mixed	.70	@	.75
Ledger & Writings	1.45	@	1.50
Solid Books	1.25	@	1.40
Blanks	1.40	@	1.50
Krafts	1.60	@	1.75
New Kraft Cuts	2.15	@	2.25
Manila Envelope Cuttings	1.65	@	1.75
Ex. No. 1 Manila	1.30	@	1.45
Print Manila	.80	@	.85
Folded News (over-issue)	.80	@	.85
Old Newspapers—			
No. 1	.70	@	.80
No. 2	.65	@	.70
Mixed Papers—			
No. 1	.65	@	.70
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.06	@	.40
Ledgers	.09	@	.40
Writings—			
Superfine	.12½	@	.18
Extra fine	.18	@	.22
Fine	.17	@	.26
Fine, No. 2	.15	@	.25
Fine, No. 3	.10	@	.20
Book, M. F.	.05½	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.09½	@	.16
Coated Lithograph	.07	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.08	@	.09
Manila Sul., No. 1	.04	@	.05½
Manila No. 2	.03	@	.04
No. 2 Kraft	.06	@	.06½
No. 1 Kraft	.06½	@	.07
Common Bogus	.03½	@	.04
(Delivered Philadelphia)			
News Print Rolls	62.00	@	—
Straw Board	52.50	@	75.00
News Board	38.00	@	42.00
Chip Board	35.00	@	40.00
Wood Pulp Board	85.00	@	95.00
Binder Boards—			
No. 1, per ton	75.00		
No. 2, per ton	70.00		
Carload lots	68.00	@	70.00
Tarred Felts—			
Regular	53.00	@	55.00
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.44	@	1.54
Best Tarred, 3-ply	1.83	@	2.08

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.10½	@	.11
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.08½	@	.09
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable, No. 1	.04½	@	.05
Blue Overall	.07½	@	.08
Cottons—According to grades—			
Washable, No. 2	.03	@	—
New Blue	.03	@	.03½
Fancy			
New Black Soft	.05	@	.05¾
New Light Seconds	.02½	@	.03
New Dark Seconds	1.85	@	2.00
Khaki Cuttings—			
No. 1 O. D.	.05½	@	.05¾
No. 2 Mixed	.04½	@	.04¾
Corduroy	.03	@	.03½
New Canvas	.08½	@	.09
New Black Mixed	.03¾	@	.04¼

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.50	@	1.60
Domestic	1.75	@	—
Manila Rope	3.50	@	4.00
Sisal Rope	1.50	@	—
Mixed Rope	1.10	@	1.25
Scrap Burlaps—			
No. 1	1.50	@	1.60
No. 2	1.10	@	1.20
Wool Tares, heavy	3.00	@	—
Mixed Strings	1.15	@	1.25
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.20	@	3.25
No. 2 Hard White	2.75	@	3.00
No. 1 Soft White	2.50	@	2.60
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.85	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.45	@	1.55
No. 2 Books, light	1.20	@	1.25
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	.95	@	1.00
Container Manila	.85	@	.90
Old Kraft	2.25	@	2.50
Common paper	.50	@	.55
No. 1 Mixed Paper	.65	@	.70
Straw Board, Chip	.65	@	.70
Binders Board, Chip	.65	@	.70
Overissue News	.85	@	.90
Old Newspaper	.65	@	.70

Domestic Rags (Old)

White, No. 1—			
Repacked	4.25	@	4.50
Miscellaneous	3.50	@	3.75
White, No. 2—			
Thirds and Blues—			
Repacked	2.00	@	2.25
Miscellaneous	1.60	@	1.80
Black Stockings (Export)	3.90	@	4.25
Roofing Stock—			
Foreign No. 1	1.65	@	1.75

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06¼
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	—	@	.06½
No. 2 Kraft	.05¼	@	.06
Common Bogus	.02	@	.02¾
Delivered New England points			
News Print Rolls	61.50	@	—
Straw Boards, rolls .009			52.50
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	37.50	@	40.00
Chip Board	35.00	@	37.50
Single Manila Lined Chip	47.50	@	50.00
Single White, Patent Coated Newsboard Bender	67.50	@	80.00
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Hard White	3.25	@	3.75
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.50	@	2.60
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	2.35	@	2.45
No. 1 Books, Heavy	1.50	@	1.55
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.15	@	1.20
White Blank News	1.60	@	1.65
Old Kraft	—	@	1.80
Print Manila	.80	@	.90
No. 1 Mixed Paper	—	@	.50
Overissue News	.65	@	.80
Old Newspapers	.55	@	.60
Box Board, Chip	.55	@	.60

Bagging
(F. o. b. Boston)

Gunny No. 1—			
Foreign	—	@	1.60
Manila Rope—			
Foreign	4.50	@	5.00
Domestic	4.75	@	—
Mixed Strings	.90	@	1.00
Jute Wool Strings	—	@	1.00
Scrap Burlaps	1.25	@	1.35
Scrap Sisal	1.60	@	1.80
Scrap Sisal for shredding	1.75	@	2.00
Wool Tares, heavy	—	@	1.37½
New Burlap Cutting	1.90	@	2.00
Australian Wool Pouches	2.75	@	3.00

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.09½	@	.10
Silesias, No. 1	.06	@	.06¼
New Unbleached	.10	@	.10½
Fancy	.04	@	.04½
Washable	.04	@	.04½
Cottons—According to grades			
Blue Overalls	.06¼	@	.06¾
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04	@	.04¼
O. D. Khaki	.05	@	—
Corduroy	.03	@	.03¼
New Canvas	.08	@	.08¼

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	4.75	@	5.25
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Twos and Blues	2.75	@	3.00
Thirds and Blues—			
Repacked	2.50	@	—
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.65	@	1.75
No. 2	1.45	@	1.55
No. 3	1.05	@	1.10
No. 4	1.10	@	1.15

Foreign Rags
(F. o. b. Boston)

Dark Cottons	1.60	@	1.65
New No. 1 Shirt Cuttings	9.00	@	10.00
Dutch Blues	2.00	@	2.12½
Lace Curtains	5.10	@	5.50
New Checks & Blues	4.25	@	4.50
Old Fustians	1.90	@	—
Old Linsey Garments	1.85	@	1.90
Repacked	.02½	@	.02¾
No. 2	1.30	@	1.35
No. 3 (Roofing)	1.15	@	1.25
No. 4	1.00	@	1.15
No. 5A	.75	@	.85
B	.65	@	.75
C	.65	@	.75

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¾	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
Book—			
No. 1 M. F. (carloads)	7.50	@	—
No. 2 M. F. (carloads	7.25	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.00	@	—
No. 2 S. C. (carloads)	7.75	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and Litho	13.25	@	—
No. 2 Coated and Litho	12.25	@	—
No. 3 Coated and Litho	11.50	@	—
Coated tinted	14.50	@	—
Wrapping—			
Rag Brown	4.95	@	—
White Wrap	5.25	@	—
"B" Manila	5.80	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.00	@	—
M. G.	7.00	@	—

(Delivered Toronto)

News, per ton—			
Rolls (contract)	61.50	@	62.00
Sheets	67.00	@	—

Pulp
(F. o. b. Mill)

Ground Wood	30.00	@	31.00
Sulphite easy bleaching	62.00	@	—
Sulphite news grade	62.00	@	—
Sulphite, bleached	75.00	@	—
Sulphate	60.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	2.85	@	—
White Blk. News	1.60	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.40	@	—
Light and Crumpled Book Stock	1.25	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.80	@	—
No. 1 Mixed Paper	.70	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.11½	@	—
Fancy Shirt Cuttings	.05¼	@	—

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PAPER TRADE JOURNAL

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THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

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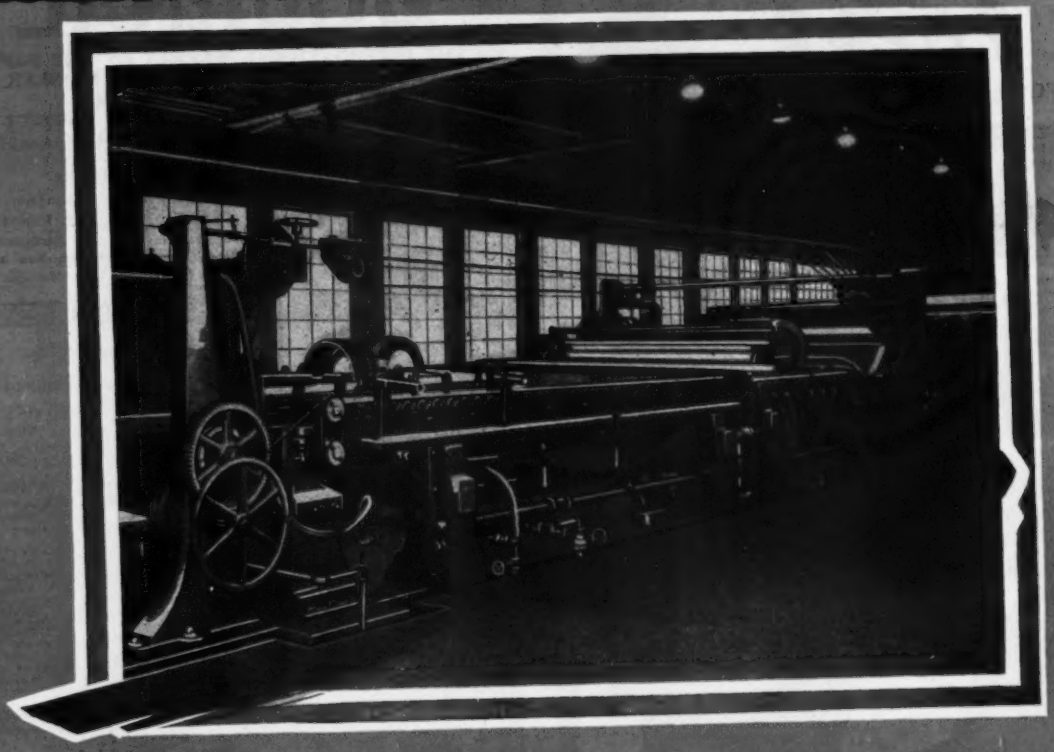
CHAMPION



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